INTERSITE SHUTTLE BUS FOR THE ELDERLY AND THE DISABLED AT EXPO 86

Prepared for the

Transportation Development Centre

by Tom Geehan of

TransVision Consultants Limited

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Un sommaire en français de ce rapport est inclus avant la table des matières.

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17. Abstract

At Expo 86, a world exposition on transportation and communications, held in Vancouver, Canada, between May 2 and October 13, 1986, the Canadian host pavilion was located about 1.2 kilometres from the main Expo 86 site. As a means of ensuring that the Canada Pavilion was accessible and barrier-free and as a means of allowing elderly and disabled visitors to travel conveniently between the various gates of Expo 86, Transport Canada provided an accessible intersite shuttle bus service.

The intersite shuttle bus service was monitored during its operation and this report provides an analysis of the results. The ridership and its distribution by various time periods, the productivity, cost and other operational characteristics are presented. In addition, the report provides an overview and description of the setting, the participants, the operation, the equipment and characteristics of the shuttle bus, and the attitudes, perceptions and characteristics of the passengers.

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17. Resume

À l'occasion d'Expo 86, exposition internationale qui s'est tenue à Vancouver, du 2 mai au 13 octobre 1986, sur le thème des transports et des communications, le Canada, pays hôte, a construit un pavillon situé à environ 1,2 km du site proprement dit. Afin de rendre ce pavillon entièrement accessible et de faciliter les déplacements des personnes âgées et des handicapés à l'intérieur du site, Transports Canada a mis en place un service de transport adapté par autobus.

Le fonctionnement de celui-ci a fait l'objet d'un suivi serré dont il est rendu compte ici. Le présent rapport donne les chiffres concernant la fréquentation totale et sa distribution temporelle, la productivité, les coûts et autres caractéristiques touchant l'exploitation. En outre, il donne un aperçu ainsi qu'une description du contexte, des participants, de l'exploitation et du matériel utilisé et met en évidence les caractéristiques de la clientèle, ses attitudes et ses perceptions particulières.

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SUMMARY

At Expo 86, a world exposition on transportation and communications, held in Vancouver, Canada, between May 2 and October 13, 1986, the Canadian host pavilion was located about 1.2 kilometres from the main Expo 86 site. Transportation between the Canada Pavilion and the Expo site was provided by an advanced light rapid transit service, called SkyTrain. To do so, it was necessary to divide the station platforms at each of the two station locations to separate regular fare-paying SkyTrain passengers from Expo 86 visitors. Unfortunately, only one side of the divided platforms was fully accessible to the disabled. Therefore, with the regular SkyTrain service using the accessible side of the platforms, the shuttle service on the other side provided by the rapid transit system between the Canada Pavilion and the Expo Site was not accessible to the disabled passenger.

Recognizing the need for accessible intersite transportation, Transport Canada organized funding and equipment to provide a shuttle bus service for the disabled. The shuttle bus service was provided by Transport Canada as a means of ensuring that the Canada Pavilion was accessible and barrier-free and as a means of allowing elderly and disabled visitors to travel conveniently between the various gates of Expo 86.

The shuttle bus service operated on a 30-minute headway between each of the four gates of Expo 86 for the duration of the exposition, using two donated vans which incorporated several unique features such as a folding ramp, flexible interior layouts, and high-quality interior furnishings. An electronic passenger information system was used at shuttle stops to provide waiting passengers with information on the current location of the vans and expected pickup time.

SUMMARY

The operation of the shuttle bus service was monitored by reviewing driver trip logs on a weekly basis, conducting intermittent ride checks and driver and passenger interviews. The number of passengers boarding at each stop were recorded on the driver trip logs. Analysis of the trip logs provided some interesting statistics on the shuttle bus service. The total passenger ridership was 24,342 (an average of 148 passengers a day for the 165 days of operation), the kilometres travelled were 35,024 and the total hours of service were 4,615. This resulted in an average productivity of 5.27 passengers per hour and an average cost of service of $3.80 per passenger (using the $20 per hour price of the contract for operation but ignoring the fixed costs of the donated facilities and equipment).

Passenger surveys were conducted at irregular intervals during the period of operation. About 425 passengers were surveyed, representing two percent of the total ridership. The vast majority of riders were first time users who just happened to see the vehicle and who had no prior knowledge of the existence of this particular service. Over half of the passengers were senior citizens and only about 15 percent were people using wheelchairs. Only a quarter of the passengers were aware of the agency (Transport Canada) responsible for providing the service and less than ten percent used the passenger information display to determine when the vehicle would arrive at the bus stop. Just about half of the passengers were from British Columbia, with about 40 percent from the Lower Mainland (the area around Vancouver) and 40 percent from the United States.

In general, the passengers were extremely satisfied with the vehicles and their interior facilities. In fact, the vehicles were considered the most successful component of the service. There seemed to be less satisfaction, however, with the services at the bus stops. Most passengers felt that there should have been a better indication of the service and its schedule at the stops, and that there should have been benches and shelters provided at the stops. Very few of the passengers actually noticed or used the Videobus passenger information display. One criticism was that the display board was too high off the ground for people with disabilities to view.

It was concluded that the Transport Canada shuttle bus service was a very successful and worthwhile contribution to Expo 86. It allowed elderly and disabled visitors to travel conveniently between the various gates of Expo and it ensured that the Canadian Pavilion was an accessible and barrier-free place to visit. The results illustrated that government, business and associations for the disabled can work together to produce a viable and needed service for elderly and disabled persons at special events using high-quality equipment.

SOMMAIRE

À l'occasion d'Expo 86, exposition internationale qui s'est tenue à Vancouver du 2 mai au 13 octobre 1986, sur le thème des transports et des communications, le Canada, pays hôte, a construit un pavillon situé à environ 1,2 km du site proprement dit. Le transport entre ce pavillon et le site était assuré par un système léger sur rail appelé SkyTrain. À chaque station, deux accès distincts ont dû être prévus, l'un pour les passagers payants, l'autre pour les visiteurs d'Expo, le résultat étant que seule la partie réservée aux premiers est restée accessible aux personnes à mobilité réduite.

Devant la nécessité de pourvoir au transport de ces personnes à l'intérieur du site, Transports Canada a mis en place un service de transport adapté par autobus destiné, d'une part, à rendre le pavillon canadien entièrement accessible et, d'autre part, à faire la navette entre les quatre portes de l'Exposition.

Fonctionnant à intervalles de 30 minutes, ce service, financé par Transports Canada, a utilisé deux minibus fournis à titre gracieux, munis d'une rampe escamotable, et dont l'intérieur, aménagé avec beaucoup de goût, se prêtait à de multiples agencements. Les personnes qui attendaient aux arrêts étaient tenues informées grâce à un système d'information électronique qui situait les deux minibus et en indiquait l'heure d'arrivée prévue à l'arrêt considéré.

Le fonctionnement des navettes a fait l'objet d'un suivi serré, par des vérifications ponctuelles à bord, par des interviews personnelles auprès des conducteurs et des passagers et, enfin, par un examen hebdomadaire du

carnet de bord dans lequel le conducteur consignait au jour le jour le nombre de passagers qui montaient à chaque arrêt, et dont le dépouillement a permis d'établir d'intéressantes statistiques. C'est ainsi qu'on a pu obtenir les chiffres suivants : fréquentation totale au bout de 165 jours d'exploitation -- 24 342 personnes pour une moyenne de 148 par jour; nombre de kilomètres parcourus -- 35 024; nombre d'heures de service -- 4 615. La productivité moyenne a donc été de 5,27 passagers par heure et le coût moyen par passager de 3,80 $, compte tenu d'un prix de revient horaire de 20 $ excluant les frais fixes du matériel et des équipements fournis gratuitement.

Les sondages faits à intervalles irréguliers ont permis d'interroger quelque 425 personnes, soit 2 p. 100 de la clientèle totale; la grande majorité d'entre elles ont déclaré que c'était la première fois qu'elles montaient à bord, que c'était par hasard qu'elles avaient aperçu le minibus et qu'elles n'étaient pas au courant de ce service. Plus de la moitié étaient des personnes âgées et seulement 15 p. 100 environ étaient en fauteuil roulant. Seulement un quart des personnes sondées savaient que ce service était offert par Transports Canada et moins de 10 p. 100 avaient consulté le système d'information électronique. Près de la moitié de ces personnes venaient de Colombie-Britannique (dont 40 p. 100 de la partie méridionale de la province) et 40 p. 100 des États-Unis.

Les passagers étaient généralement très satisfaits des minibus et de leur aménagement intérieur. À vrai dire, ils trouvaient que ceux-ci constituaient l'élément le plus réussi du service, comparativement au service fourni aux arrêts. La plupart d'entre eux estimaient, en effet, que le service de navette aurait dû être plus visiblement annoncé et les horaires mieux indiqués, et qu'il aurait fallu prévoir des bancs aux arrêts ainsi que des abribus. Peu de passagers ont remarqué et consulté le tableau d'affichage électronique, celui-ci ayant été placé trop haut pour être vu par une personne handicapée.

La conclusion a été que le service de navette par autobus mis en place par Transports Canada a bien réussi et a constitué un apport utile à Expo 86. Il a facilité les déplacements des personnes âgées et des handicapés à l'intérieur du site et accru l'accessibilité du pavillon canadien. De plus, il a montré que les milieux intéressés (gouvernement, secteur privé et associations des handicapés) peuvent travailler ensemble pour fournir à ces personnes un service adéquat et de qualité dans le cadre d'événements spéciaux comme Expo 86.

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1. INTRODUCTION

Expo 86 was a World Exposition on Transportation and Communications, held in Vancouver, British Columbia, Canada between May 2 and October 13, 1986. Sanctioned by the International Bureau of Expositions and sponsored by the Government of Canada, Expo 86 was presented by the Government and people of British Columbia. It was the largest special category World Exposition ever staged in North America and the first to focus on transportation and communications.

Located on a 68 hectare (170 acre) site which curved along the waterfront in the heart of Vancouver, the nation's third largest and most beautiful city and Canada's gateway to the Pacific, the main Expo 86 site contained a marvelous and fascinating mosaic of technology, culture and cuisine in an impressive array of pavilions and exhibits for almost six months.

The Canadian host pavilion was located about 1.2 kilometers from the main Expo 86 site within the federal government's Canada Place complex which also housed the Pan Pacific Hotel, a World Trade Centre, the World Business Showcase, and a cruise ship terminal -- all of which would have been impossible to locate on the Expo 86 site.

Free transportation between the Canada Pavilion and the Expo site was provided by a state-of-the-art light rapid transit service, called SkyTrain. To do so, it was necessary to divide the station platforms at each station location in order to separate fare-paying regular SkyTrain passengers from Expo visitors. Unfortunately, both sides of the divided platforms were not easily accessible by the disabled. Therefore, with the regular SkyTrain service remaining accessible, the shuttle service provided by the rapid transit system was not easily accessible to the disabled passenger.

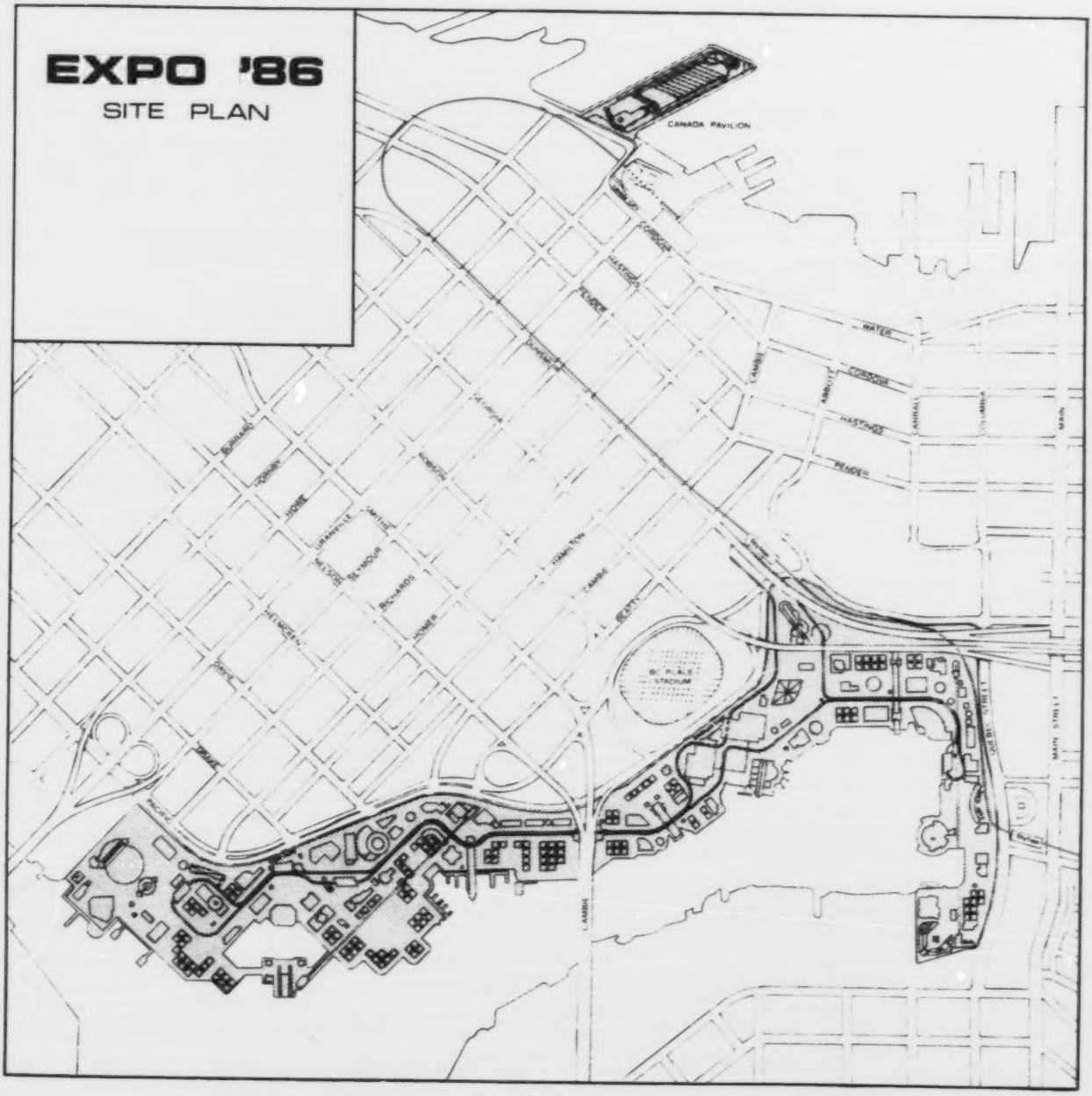


Exhibit 1: Expo 86 Site Plan

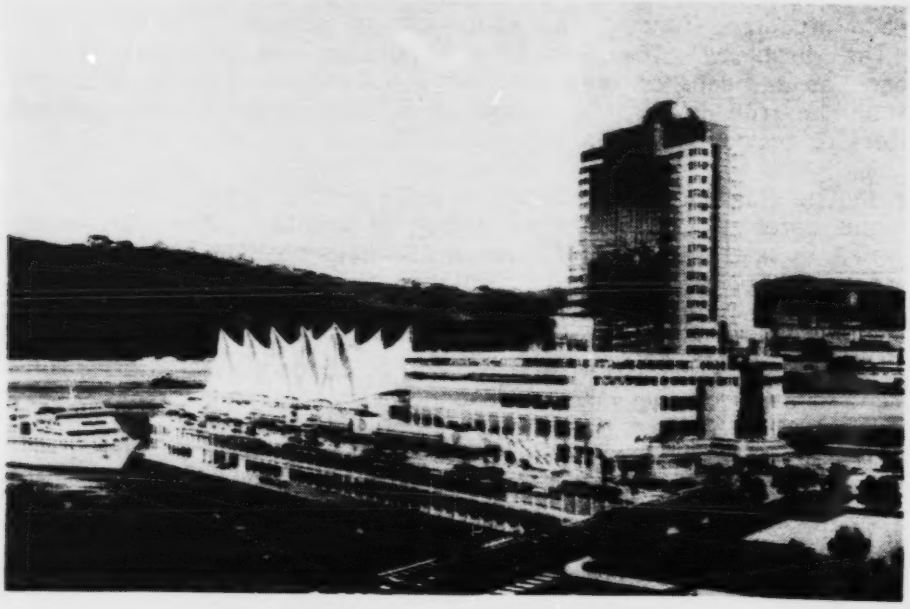


Exhibit 2: Canada Place

Exhibit 3: Expo 86 Site

INTRODUCTION

Recognizing the need for accessible intersite transportation, Transport Canada organized funding and equipment to provide a shuttle bus service for the disabled. The Shuttle Bus Service was provided by Transport Canada as a means of ensuring that the Canadian Pavilion was accessible and barrier-free and as a means of allowing elderly and disabled Expo visitors to travel conveniently between the various gates of Expo 86.

The Shuttle Bus Service operated on a 30-minute headway between each of the four gates of Expo for the duration of the fair using vans donated and modified by Get-Away Enterprises of Richmond. The vans were operated under contract by Progressive Building Maintenance. They incorporated several unique features such as a folding-ramp, flexible interior layouts, and high-quality interior furnishings. An electronic passenger information system was also used to provide waiting passengers with information on the current location of the vans and expected time of pickup.

The Transportation Development Centre was interested in monitoring operations and collecting data during the period of operation of the shuttle service that could be used to: improve reliability of service, improve efficiency of operations to reduce costs, improve dissemination of information to the public and decision-makers, adapt the service as required to fit consumer needs, identify and handle more effectively emergencies and special situations, and to gain insights and understanding that may be helpful in other similar situations. Consequently, TransVision Consultants Limited were retained to monitor operations. The results of this project to monitor the Shuttle Bus Service are summarized in this report.

2. THE SETTING

Expo 86 was Canada's second world's fair in less than 20 years. Like its Montreal predecessor, this world exposition contained an interesting mosaic of technology, culture and cuisine in an impressive array of pavilions, activities and exhibits. It provided an opportunity to learn about other nations by visiting their pavilions, talking with their hosts and hostesses, sampling their foods, enjoying their cultures and admiring their achievements. It was an occasion to visit exhibits from 54 nations, seven provinces, two territories and three states, about twenty corporations, as well as theme plazas, theatres, amusement rides, international restaurants.

Expo 86's theme was "World in Motion, World in Touch" and it epitomized the twin themes of transportation and communications. Accessible by land, sea and air, Expo 86 was the focus of an incredible variety of transportation systems, including water taxis, ferries, planes, hydrofoils, moving sidewalks, aerial tramways, and a monorail.

The statistics alone told the story: Almost $2 billion was spent on Expo 86 by all levels of government, the participating nations and over 40 Canadian and international companies. Over 4 million people, three times the population of Greater Vancouver, made over 22 million visits to Expo. They were able to taste the cuisines of 25 nations and all regions of Canada. Almost 100 pavilions were located on the 68 hectare site. Of the fair's over 43,000 performances, nine out of ten were free. Thousands of performers, from renowned international opera and ballet stars to circus acts, came from 50 nations. The best of Canada's offerings were on stage. Over 300 audio-visual presentations, involving everything from the huge Omnimax screen to three-dimensional movies to simple television monitors, entertained the visitors.

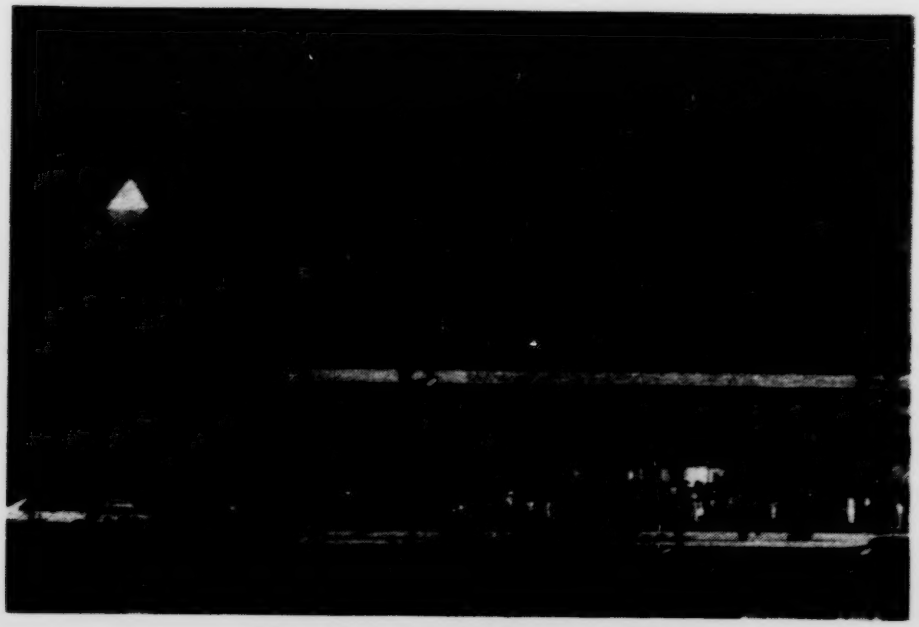


Exhibit 4: Expo 86's Main Gate

At Expo 86, the Canadian Government created the largest and most ambitious pavilion that the nation has ever designed for any World Exposition. The inescapable fact about the $144.8 million public complex -- which extends three city blocks into the Burrard Inlet -- is that it looks like a colossal ship in full sail. At the landward end, it rises in the shape of a sea-going vessel's superstructure; a glass-walled restaurant forms the sculptured prow. It's the amidships area that underlines the dramatic nautical design. The graceful roofline is created by five surf-white sails, of Teflon-coated fibreglass.

Beneath the sails, visitors were entertained by live action and astonishing visual effects. The space shuttle's Canadarm, leading-edge satellites like the Radarsat, and a unique helium airship called the Hystar, were used to highlight Canada's unique contributions in space, transportation and communications.

And just beyond the pavilion, but within the same harbourfront complex, there was a sophisticated forum for Canadian business and industry to parade their products and services before an international audience. The World Business Showcase and the Canada Business Opportunity Centre, both federal government creations, were conceived and used to demonstrate the scope and quality of Canada's commercial enterprise to foreign business visitors.

Exhibit 5: The Canada Pavilion

One of the unique contributions of Expo 86 to world's fairs was the specialized periods during which experts in particular fields of transportation and communications came together from around the world. The specialized period of July 20 to July 25 was called **Communications and Mobility for Elderly and Disabled People.** On show was the latest technology aimed at helping the disabled. This period recognized the question of access for disabled people to urban transit systems and a whole range of existing transportation and communication services.

The question of accessibility for disabled people was one that was well addressed by Expo 86 with the advice and assistance of people like Lorne Kimber, President of the Canadian Association of Disability Communicators, Ed Desjardins, a consultant with the G.F. Strong Rehabilitation Centre, architect Ted Degrey and others.

The Expo 86 Site had been planned for the enjoyment and safety of all visitors, including those with special needs. Stairs were marked with tactile warning strips, handrails were extended and stair treads were coloured to be easily seen by visually impaired guests. Any area of the site which was publicly accessible could be reached by wheelchair. This included all Expo-operated pavilions, gates, restaurants, shops, cabarets and theatres. Most rides and on-site transportation systems were designed to accommodate patrons with disabilities. All plazas could be entered by

wheelchair. Entrances, restrooms and drinking fountains were also designed for wheelchair accessibility. Theatres were equipped with entrance ramps and spaces for wheelchairs. Restaurant tables were of suitable height for wheelchair patrons.

Ticket Program. A special ticket price was available to eligible disabled persons, through authorized associations for the disabled throughout British Columbia. If it was verified by an authorized association that an attendant was required to accompany the disabled person, there was no charge for the attendant. Generally, those who require an attendant in their day-to-day lives were eligible to receive attendant consideration.

Special Services. Wheelchairs and electric scooters could be rented at the gates for a small rental charge. Signs were designed to meet the needs of visually impaired visitors who are not blind. International pictographs were used throughout the site and wording was kept to a minimum. Signs which were within reach had vinyl applied so that they could be read by touch. All restrooms on site were designed to be wheelchair accessible. All public telephones were placed at a height that could be reached by a patron in a wheelchair and 75 of the 300 phones had adjustable volume controls. Guide dogs were permitted on site and a Guest Relations staff of 3000 volunteer staff and 150 paid staff were specially trained to help with any guest concerns.

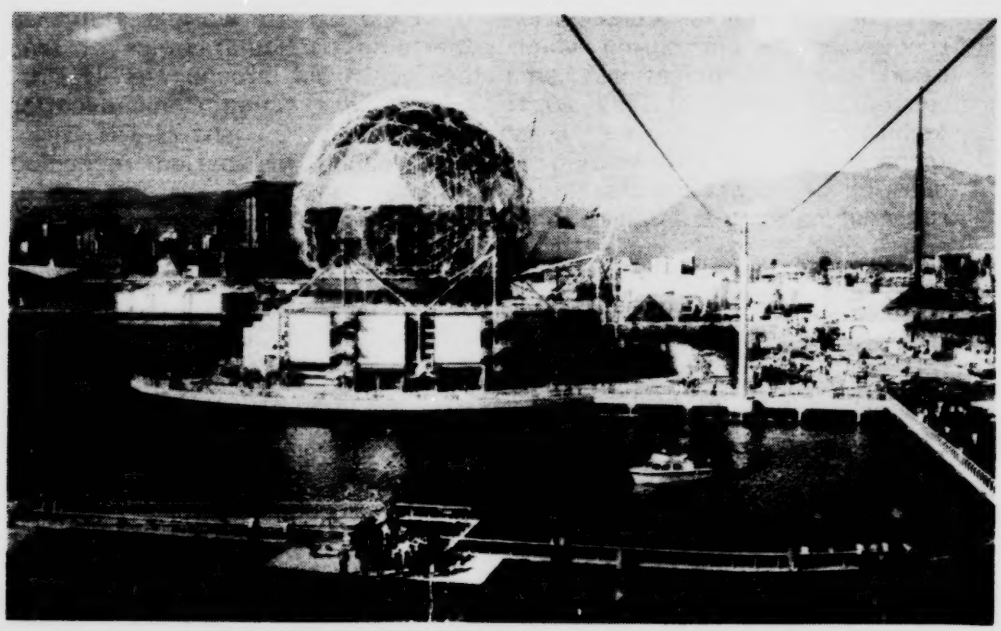


Exhibit 6: Expo Centre

Exhibit 7: British Columbia Pavilion

Canada Pavilion. All areas of the Canada Pavilion were wheelchair accessible, including its theatres and restaurant areas. Special vehicles (the SCAT vehicle) were available to transport mobility-impaired guests from the SkyTrain Waterfront Station to the Canada Gate adjacent to the Canada Pavilion. For guests with visual impairments, elevators were equipped with tactile call buttons and audible up-down indicators. Elevator lobbies had textured floors. Other features included guardrails, handrail texturing, and tactile warning strips on stairs. In addition, there was a special travel line for the visually impaired. The Teleglobe Theatre was especially attractive to the visually impaired due to the verbal description accompanying the film. Where appropriate, Canada Pavilion theatres provided instruments to assist hearing impaired guests. Exhibits, however, were largely visual.

Other Pavilions. All International Pavilions were accessible to wheelchair patrons. The exhibits in some of these pavilions were of particular interest to visitors with impaired mobility. On display were some of the latest in vehicle designs for the disabled, such as the voice-activated Daimler-Benz and the voice-controlled wheelchair in the German Pavilion and the Elswick Envoy car for chairbound drivers at the British Pavilion. In the Swiss Pavilion were various devices for moving wheelchairs up and down stairs and for evacuating the disabled in emergencies. All Provincial, State and Corporate Pavilions were also accessible to guests in wheelchairs.

The Air, Marine and Land Theme Plazas, including the ferry-banking dock at the Marine Plaza, were wheelchair accessible.

Restaurants, Theatres and Cabarets. All restaurants, theatres and cabarets on site were wheelchair accessible, including restroom facilities in all restaurants. Space in theatres had been allotted for viewing from wheelchairs. There were spaces for 18 wheelchairs at the Xerox International Theatre, ten at Expo Theatre, eight at Kodak Pacific Bowl, four at the Futures Theatre and six at the Omnimax Theatre. Performer facilities, backstage areas and dressing rooms were wheelchair accessible.

Amusement Rides. The Cariboo Log Chute, the Looping Starship and the Scream Machine were not accessible to mobility handicapped guests. The Observatron section of the Space Tower, a ring-shaped observation cabin which wound its way to the top of the Tower, could accommodate two wheelchairs per trip. The Space Drop section of this ride, however, could not accommodate wheelchairs. The 1907 Philadelphia Company Carrousel could accommodate up to four wheelchairs at a time.

Getting Around On Site. The Ferry service was wheelchair accessible; as was the Monorail which traversed the length of the site. The VIP car and the last car of each monorail train could accommodate two wheelchairs

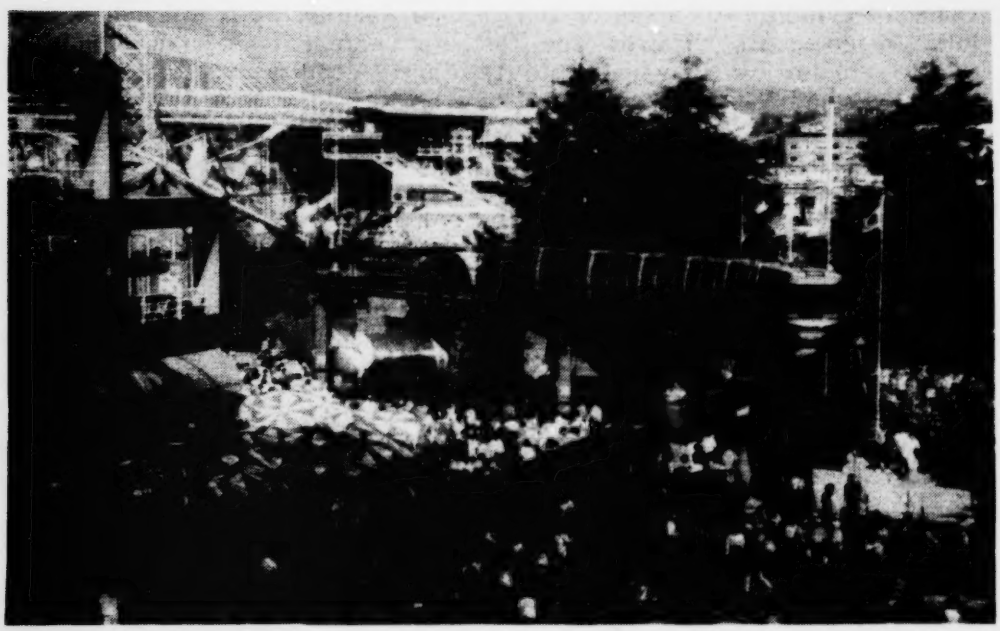


Exhibit 8: Expo Site Monorail

Exhibit 9: BC Transit SkyTrain

and there were wheelchair ramps at all seven stations. The demonstration track of Japan's HSST (High Speed Surface Transport) was fully accessible. The SK people mover at the French Pavilion, made by the French Company Soule, had specially marked cabins which were wheelchair accessible. Both the CP Air Skyride and the Air Canada Skyride had the capacity to accommodate disabled visitors. Those with electric wheel-chairs, however, were required to make a round trip, leaving their wheel-chairs at the point of departure. Those with fold-up wheelchairs could make a one-way trip.

Transportation to the Site. All cars on the SkyTrain were easily accessible to most wheelchairs. HandyDart, a BC Transit-operated special service for the disabled, also provided service to and from all gates. Special parking spots for disabled guests were provided and a parking lots shuttle bus service was operated between the gates and the lots. In addition, the Canada Pavilion provided a transportation service for senior citizens and the physically disabled. Eligible passengers could be picked up at their homes and taken to the Canada Pavilion. Return transportation was also available. This free service was operated by the Canadian Association of Disability Communicators (CADC) and it used two specially-equipped vans provided by Chrysler Canada and modified by Get-Away Enterprises Inc. The service was operated daily from 9:00 a.m. to 9:00 p.m. on a first-come, first-served basis for the last two months of the fair.

3. THE PARTICIPANTS

Transport Canada was responsible for organizing the funding and equipment to provide the shuttle bus service for the disabled so that these people could have accessible intersite transportation at Expo 86. The vans were donated and modified by Get-Away Enterprises Incorporated of Richmond and were operated under contract to Transport Canada by Progressive Building Maintenance Limited of Vancouver, B.C.. RMS Industrial Controls Incorporated of Port Coquitlam, B.C. in association with Groupe Serel-France, were responsible for installing an electronic passenger information system that was used to provide waiting passengers with information on the current location of the vans and expected time of pickup.

The Shuttle Bus Service was provided by Transport Canada as a means of ensuring that the Canadian Pavilion was accessible and barrier-free and as a means of allowing elderly and disabled Expo visitors to travel conveniently between the various gates of Expo 86.

Transport Canada. Transport Canada, through their Expo 86 Coordination Branch, which was established to coordinate the department and federal transportation crown corporations involvement in Expo 86, were responsible for organizing the service and providing the funds for operation of the service. Bruce Howe, Commissioner General of the Canada Pavilion, Bill Leithead, Vice President, Canada Pavilion, Al Bach, Director, Expo 86 Coordination, and Pat Ulicki, Coordinator, Expo 86 Coordination were the individuals responsible. Expo 86 Coordination monitored the operation of the service and held regular project meetings with the major participants to review the operation and to resolve any problems that may develop. The Transportation Development Centre provided funds for monitoring the operation of the service. The Honourable Don Mazankowski was the

Exhibit 10: Some of the Participants (John Gedak, Doug Mowat and Don Mazankowski)

Transport Minister at the start of the service (shortly thereafter, the Honourable John Crosbie was appointed Transport Minister). Doug Mowat (see Exhibit 10), a Member of the Legislative Assembly for the Province of British Columbia, was involved on behalf of the Province.

Get-Away Enterprises. Get-Away Enterprises Incorporated, a Richmond-based camper van conversion firm, was responsible for donating and modifying the vans for the shuttle service. John Gedak, the President, was the driving force. For many years, Get-Away built strictly camper vans and concerned themselves solely with perfecting that art. They designed, wind tunnel tested and patented their air foil raised roof, designed their own power converter, and so on. As the years progressed, they produced various floor plans in an attempt to maximize every available inch of a van's interior. Interiors became more comparable to a yacht or an executive jet than a camper. During 1985 and continuing this year, their increased use of maxi-length vans gave them even more room to create a spacious mini-motor home. Clever combination of weight saving construction methods, aerodynamic research and engine and transmission packages resulted in Get-Away achieving a leadership role in the industry.

In November 1985, Get-Away launched a Corporate and Special Vehicles Division to produce vans for such clients as corporations, radio stations, clubs, or anyone who needs high profile, rolling hi-tech vehicles that grab attention on the road or at community events. Special Vehicles is also involved in the design and construction of ambulances, wheelchair accessible vehicles, and general special needs units. It was this Division that was responsible for designing and producing the shuttle buses for the disabled.

Progressive Building Maintenance. Progressive Building Maintenance was responsible for operating the service under contract to Transport Canada. Progressive Building Maintenance was, at the time, under contract to Transport Canada to provide the airport bus service and it was expeditious to expand their contract to include the shuttle bus service for the disabled. Progressive trained the drivers and were responsible for monitoring their performance and maintaining the vehicles.

RMS Industrial Controls. RMS Industrial Controls specializes in custom design and manufacture of electronic control systems for industrial applications in construction, forestry, offshore oil and transportation. In association with Groupe Serel-France, they were responsible for installing and maintaining an electronic passenger information display at the bus stops.

4. THE EQUIPMENT

The Shuttle Buses. Transport Canada was a special client for the Special Vehicles Division of Get-Away Enterprises -- designing and building the two converted vans to carry disabled and elderly persons from Canada Place to the Expo Site. The two vans were turned over to Transport Minister Don Mazankowski at a special ceremony at Canada Place on Wednesday, April 30th. The ceremony was also attended by Canada Pavilion Commissioner General Bruce Howe, Lorne Kimber, representing handicapped organizations attending the fair, and many profile members of the disabled community.

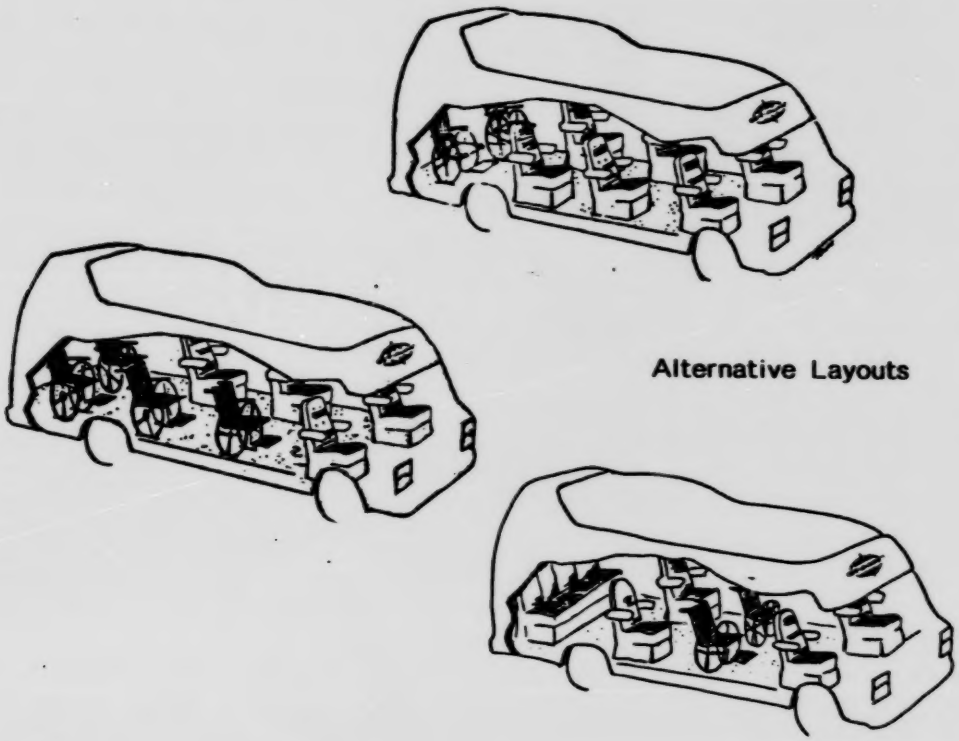
The vans could carry up to three wheelchair passengers and seven other passengers, or, depending on demand, could be quickly converted to other passenger configurations. In addition to the customized luxury interiors and trouble-free ramp loading system, the vans were the first to incorporate stricter safety construction 'rollover' features and as a result set new standards for safety for vehicles of this type. Some of the other features that the vans have incorporated include: non-skid flooring, specially-designed seats, large windows, integrated construction, and fire resistant materials.

When the flooring in the van was first installed, it looked good but it was felt that it might be slippery and a possible hazard. Get-Away looked all around for a possible replacement material and finally found that hospitals often use a non-skid high-traffic flooring (Novilon) that might be suitable. This is the material that was finally used on the floor of the vans.

The walls of the vans were created from a special plastic-injected molding that provided for a better appearing, as well as a tougher, wall for the wear and tear experienced in transit applications such as this.

Exhibit 11: Design of the Shuttle Buses

Exhibit 12: The Shuttle Bus in Action



Alternative Layouts

Selected Layout

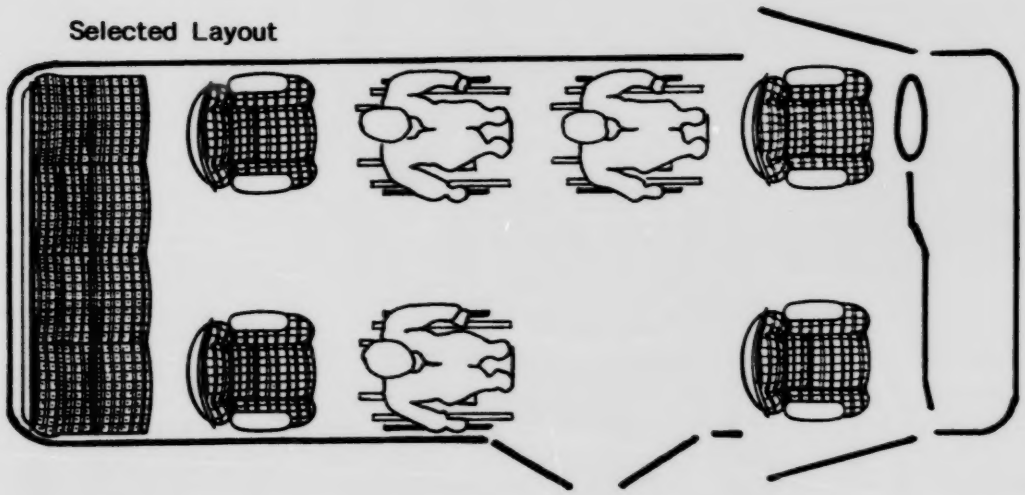


Exhibit 13: Interior Design of the Shuttle Buses

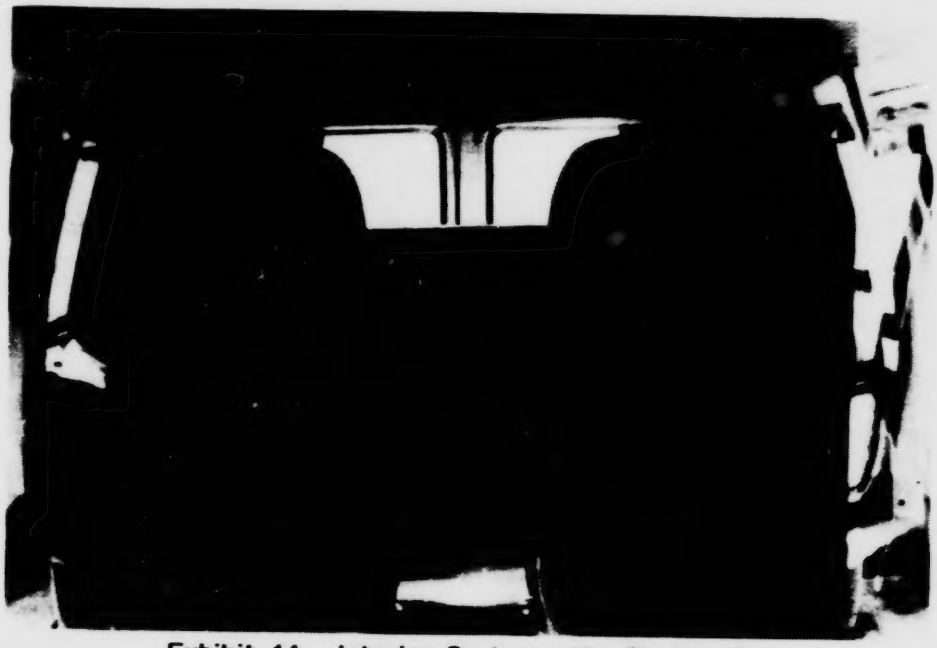


Exhibit 14: Interior Seats on the Shuttle Bus

Exhibit 15: Folding Wheelchair Ramp

THE EQUIPMENT

Although the vehicle is based on a standard Dodge Maxivan, a number of interior modifications were undertaken. The seats, for example, were especially designed by Get-Away for older people with possible back problems that might be driving a vehicle for long periods. The seats use a firmer orthopedic design with lumbar supports for the lower back. It was basically a European-style approach to chair design.

The tinted windows were large, letting in a lot of light and providing excellent visibility. They were covered with venetian-style louvered blinds for additional shading. Since all the windows opened and there were roof vents with screens, the ventilation was excellent.

The running boards were also specially designed by Get-Away. They looked sporty, provided an easy step up to the van for the elderly, and protected the sides of the van from mud and rocks that may be thrown up from the slightly wider than normal tires.

The roof was specially designed and used blended steel fibreglass bonding to provide the same strength as a steel rollbar, supporting 1-1/2 times the vehicle weight. It was computer stress analyzed to meet a new safety code relating to vehicle rollovers (i.e. must support 1-1/2 times weight).

The ramps folded into the vehicle and were of a simple, manual, trouble-free design. The ramps were about 30 inches wide (originally they were about 27 inches but were widened) at their narrow point and about eight feet long when unfolded -- they folded in half. The resulting gradient was about 1:8 or about 12 percent. If the drivers were to raise and lower the ramp at every stop, in a 14-hour shift they would have raised and lowered the ramp 56 times per shift or 392 times a week or 9,240 times during Expo. It is certain that an electric or hydraulic lift would have failed many times in that period (in addition to being so slow to operate that the drivers would always be behind schedule).

The wheelchair restraint system consisted of a combination of belts, hooks, D-rings, rachet buckles and companion floor-mounted eye-hooks, supplied by Aeroquip Canada Ltd. The ends of the belts looped around the chair frame and were clipped into D-rings. The tensioning straps were then pulled tight. At the rear of the chair, tensioning is applied with the rachet buckle. The buckle cam is pressed to release the restraint belts.

The cost of acquisition, research and development and conversion of the two vans was estimated by Get-Away Enterprises at between $210,000 and $250,000 (i.e. $105,000 to $125,000 each). At the conclusion of Expo 86, the vans were slightly modified and donated to the New Vista Society in Burnaby (for the transportation needs of several care homes for the elderly) and the Workmen's Compensation Board in Richmond (for the transportation needs of individuals on Workmen's Compensation).

Exhibit 16: The Videobus Information Display

The Videobus System. The Videobus system installed by RMS Industrial Controls at the various shuttle bus stops on the route was originally developed for the City of Nice in southern France. Designed by a Nice firm (Groupe SEREL-France), this system was developed with the cooperation of the Societe des Transports Urbains de Nice. It was a part of the French Government's contribution to Expo 86.

The system was designed to improve passenger comfort at stops, by reducing as much as possible the tedium of waiting at stops, caused mainly by uncertainty, by providing passengers with continuously updated vehicle status information at bus stops.

To fulfill this requirement, the system detected buses and identified their location; transmitted these data to the information points (at the bus stop); and displayed the data at these points in a manner that allowed potential passengers to see where a vehicle is presently and when it might arrive at the stop.

The equipment fitted to the vehicles included a microwave transceiver in a sealed case, fitted inside the vehicle at a height of 2.50 meters above the ground; and an encased logic microprocessor for preselecting the vehicle identification number and/or bus route number.

THE EQUIPMENT

The roadside equipment consisted of support-mounted beacons at much the same height as the transceivers in the buses. They consisted of sealed cases containing a microwave transceiver; a microprocessor logic unit for receiving bus messages and transmitting beacon messages; and the rotary switches for preselecting their identification number. These beacons were sited near the stops along the routes.

The equipment mounted on the vehicles was linked to the detector beacons by microwaves, which ensured better directivity and greater transmission reliability than conventional radio waves. The beacons transmitted an 'interrogation message' continuously and cyclically. When buses entered the transmission area they received and identified these messages, and then transmitted their own 'vehicle message'. The vehicle message consisted of the vehicle identification and route number.

The detector beacons were linked to the bus stops in the original system in Nice by telephone cable so as to shield the transmission from the phenomena of screening and interference which normally affects urban radio links. For this application, however, RMS Industrial Controls used a special high-frequency radio link which proved successful. If the vehicle message is correct, the beacon identifies the route on which the vehicle is travelling. The vehicle message is then converted into a beacon message by replacing the route code by the beacon code. This beacon message is then transmitted to the bus stop.

Videobus displays installed at each stop on supports gave passengers a picture of the route. The route appeared on the front of the displays and was illustrated by means of a diagram showing the names of the stops upstream. Indicator lamps representing the detection points were placed between each stopping place. For reasons of size and legibility, the capacity of the boards was limited to the one route with seven indicator lamps each. Reception of the 'beacon messages' caused the indicator lamp for the relevant detection point to light up on all boards downstream from the transmitting beacon. This lamp continued to glow until the next beacon had detected a vehicle. If for some reason (damage, shielding) the next beacon was unserviceable, the indicator lamp was extinguished by the next serviceable beacon that was encountered.

In this way, passengers could follow the progress of the vehicle they were waiting for. The passenger information was supplemented by details of the average waiting period, i.e. the average travelling time between the stop at which the vehicle had been detected and the stop at which the passenger is waiting.

5. THE ROUTE

The Shuttle Bus operated every 30 minutes around a fixed route which stopped at each of the four gates of Expo 86: the Canada Gate, the West Gate, the Stadium Gate and the East Gate. Along the route, various tourist spots were encountered. The route is illustrated in Exhibit 17 and is described in the following paragraphs.

At the first stop at Canada Gate was the Canadian Pavilion and Canada Place. After Expo 86, this part of the complex becomes the Vancouver Trade and Convention Centre, the second-largest convention centre in Canada. Other features of Canada Place included the World Trade Centre where several companies set up displays of their services and products; the Cruise Ship Terminal, with complete facilities to accommodate several ships at the same time; and the elegant 505-room Pan Pacific Hotel.

After the stop at the Canada Pavilion, the route headed up Howe Street. At the corner of Howe and Dunsmuir, the Arts, Sciences and Technology Centre, is one bolck to the left, containing three floors of changing exhibitis in a 'hands-on' science museum. Next on the immediate let is the two-level Pacific Centre, one of Canada's largest indoor and underground shopping malls. Another block up Howe Street is Robson Square on the right. The first building encountered is the old Law Courts Building and now the home of the Vancouver Art Gallery. Next on the right, on a lower level in the middle of Robson Square, is the Robson Square Media Centre, where lectures, exhibitions, cultural displays, films, and musical performances are held. Also in this area are restaurants, fast food outlets, and even a skating rink. The next building on the right is the Law Courts Building, the magnificent creation of Vancouver architect Arthur Erickson completed in 1980.

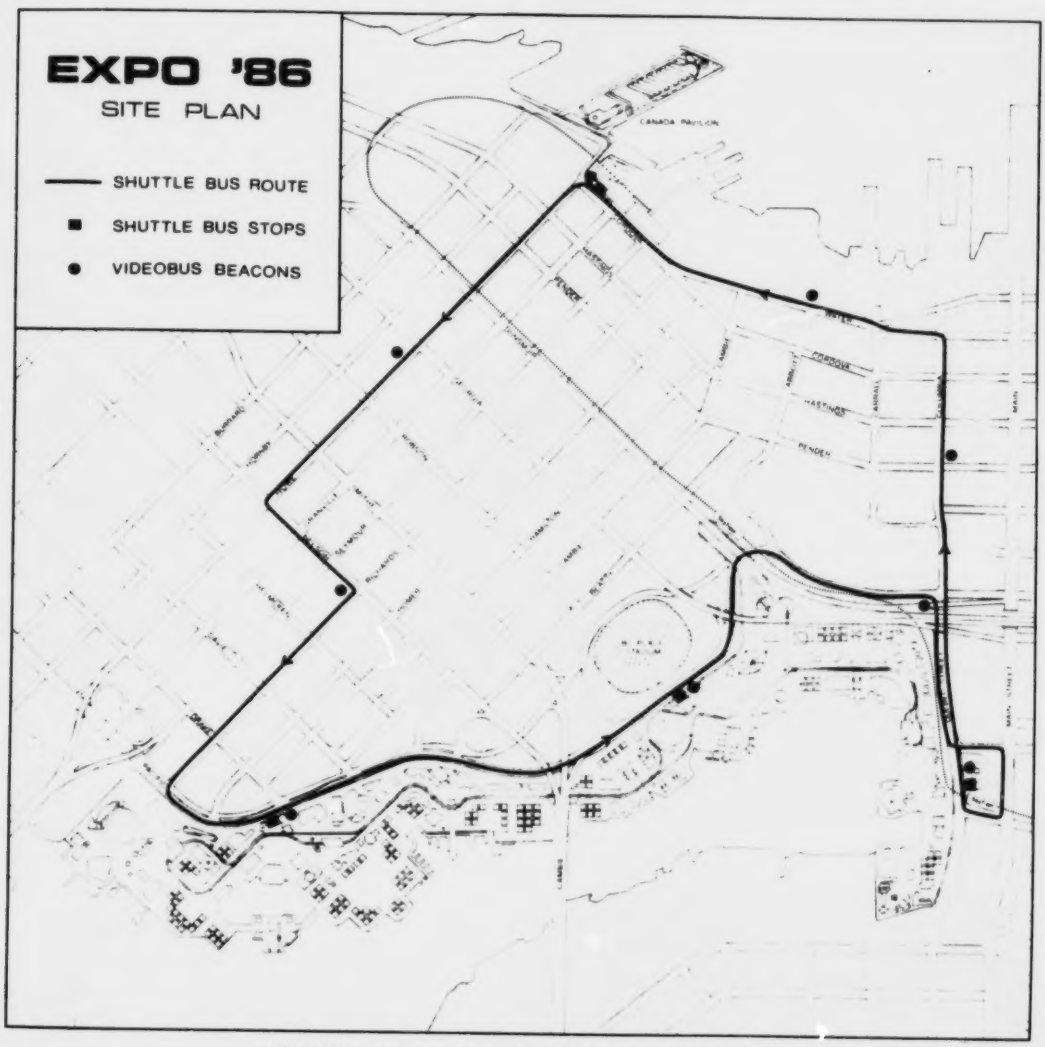


Exhibit 15: The Shuttle Bus Route

Turning left on Nelson Street and right on Richards the route goes past some old warehouses and the light industrial area of Yaletown. At the end of Richards is Pacific Boulevard, a relatively new street which was constructed along the north shore of False Creek to provide better access to the BC Place Stadium. Turning left on Pacific, the West Gate of the main Expo Site is immediately encountered. The West Gate provided access to the Yellow Zone where some of the featured exhibits included the Great Hall of Ramses II, Kodak Pacific Bowl, Xerox International Theatre, British Columbia Television Pavilion, Telecom Canada Pavilion and

the pavilions of the United States, Oregon, Washington State, Ivory Coast, Cuba and General Motors. The Green Zone could also be accessed at this gate, where the United Nations Pavilion was located, along with the pavilions of a dozen countries from Asia, Europe and South America, as well as the Marine Plaza.

Still on Pacific Boulevard, the next stop was the Stadium Gate, across the street from the BC Place Stadium. The Stadium Gate opened onto the Blue Zone of Expo 86 where the Plaza of Nations, the Night Life Plaza and the British Columbia Pavilion were located. Fairly close by were the Pavilions of the Union of Soviet Socialist Republics, Switzerland, Mexico, Peru, Saudi Arabia and Czechoslovakia in the Pink Zone. The Aviation Plaza was also located here.

Leaving the Stadium Gate, the route continues on Pacific before turning right from Pacific onto Quebec Street. The route progressed south on Quebec and then over to Main and Terminal in order to turn around and head north past the East Gate, Expo's colourful main gate. The East Gate opened on the Red Zone, where the Expo Center and the pavilions of the People's Republic of China, the Yukon and Northwest Territories were located. Immediately adjacent was the Folklife Center in the Purple Zone, the Ontario and Japan Pavilions and the Land Plaza.

Continuing further north on Quebec Street, the route heads into Chinatown, second largest in North America, after San Francisco. Part of the enjoyment in visiting Chinatown is to be found by wandering through many of these stores, browsing through rows of goods. Behind the Chinese Cultural Centre on Pender Street is the Dr. Sun Yat-Sen Park and Garden, a perfect replica of a classical Chinese Garden. It was designed after the 15th-century garden city of Suzhou and is the first complete garden of the Ming Dynasty to be built inside or outside of China since 1492. The garden features bridges, terraces, pavilions and rockeries with a profusion of bamboo and bonsai trees bordering a pond.

After passing through Chinatown the route followed Water Street through Gastown. Gastown is the site of Vancouver's first community dating back to the 1860s. It was built around the Globe Saloon, owned and operated by a former river pilot, Captain John Deighton, affectionately known to all as 'Gassy Jack' because he just never stopped talking. 'Gassy Jack' Deighton became one of the city's founding fathers, opening his saloon in 1867 and today his memory lives on through this unique part of Vancouver, which bears his name in part.

Through Gastown, passengers of the shuttle bus were able to see some of the history of Vancouver. Maple Street Square is located here, overlooked by a large statue erected in 1970 of 'Gassy Jack' Deighton himself. The square is named after an enormous maple tree that originally grew on the spot. Unfortunately, that particular tree has long since gone, but a

replacement has been planted, along with several others along either side of Water Street. The Mews on the south side of Water Street is an interesting arcade built around the old, original passageways with names like Blood Alley and Gaoler's Mews that tells the visitor some of the history of the place. At the corner of Cambie Street is the much-photographed Gastown Steam Clock, the first of its kind in the world. Framed in antique bronze, with a glass windowcase that allows the viewer to watch the steam engine and clock movements in operation, the Westminster Chimes sound each quarter hour, with the big production number on the hour every hour.

After continuing along Water Street, a right turn is made on Cordova where the Waterfront Station is encountered. The Waterfront Station is a former railway station that has been converted into a multi-modal transportation terminal, office and retail area. The SkyTrain, SeaBus and bus system all have stops at the Waterfront Station.

Passing the Waterfront Station, the route returns to its stop in front of the Canada Gate and the Canada Pavilion.

6. THE OPERATION

The operation of the Shuttle Bus Service was monitored by reviewing driver trip logs on a weekly basis, conducting intermittent ride checks and driver interviews. The purpose was to answer such questions as: Have the drivers encountered any difficulties with the operation of the vehicle? What kind of traffic difficulties have they experienced? Is the schedule satisfactory? Is it satisfactory at all periods during the day? What has been their experience with the passenger information display?

Throughout the operation of the Shuttle Bus Service, the drivers were requested to keep trip logs, recording the number of passengers that boarded at each stop and the time that they left the stop. The ridership statistics were used to keep track of the number of persons using the service -- mainly by the category of passenger. The trip logs also provided information on the distance travelled and the hours of service. The trip logs were obtained once a week and the information entered into a computer using a database management program to provide daily and weekly operational summaries. The format of the driver trip logs is illustrated in the exhibit on the following page. The actual daily, weekly and monthly operational summaries are provided in Appendix A.

When the service first started, no attempt was made to keep to a fixed schedule since it was believed that the videobus display systems would be sufficient to inform the potential passengers of bus arrival times. Unfortunately, the display systems experienced considerable reliability problems at the beginning of the service due to technical difficulties (the bulbs kept burning out). Therefore, a fixed 30-minute schedule was instituted in June and was adhered to throughout the rest of the exposition, in spite of the fact that the videobus system worked fairly consistently for the duration.

Transport Canada / Transports Canada — Canada

SHUTTLE BUS
TRIP LOG

DATE ☐☐☐☐☐☐ (DD MM YY)

VEHICLE NUMBER 5

SHIFT	OPERATOR	TIME	ODOMETER
FIRST SHIFT	DRIVER	START ☐☐☐☐ STOP ☐☐☐☐	START ☐☐☐☐☐ STOP ☐☐☐☐☐
SECOND SHIFT	DRIVER	START ☐☐☐☐ STOP ☐☐☐☐	START ☐☐☐☐☐ STOP ☐☐☐☐☐

SHIFT	VEH TRIP NO	TRIP LOCATION: ORIGIN	TRIP LOCATION: DESTINATION	DEPARTURE TIME: SCHEDULED	DEPARTURE TIME: ACTUAL	BOARDING PASSENGERS: WHEELCHAIR	AMBULANT	ATTENDANT	OTHER	TOTAL	REMARKS
FIRST SHIFT	2	Canada Gate	West Gate	09:30							
		West Gate	Stadium Gate	09:45							
		Stadium Gate	East Gate	10:00							
		East Gate	Canada Gate	10:15							
	4	Canada Gate	West Gate	10:30							
		West Gate	Stadium Gate	10:45							
		Stadium Gate	East Gate	11:00							
		East Gate	Canada Gate	11:15							
	6	Canada Gate	West Gate	11:30							
		West Gate	Stadium Gate	11:45							
		Stadium Gate	East Gate	12:00							
		East Gate	Canada Gate	12:15							
	8	Canada Gate	West Gate	12:30							
		West Gate	Stadium Gate	12:45							
		Stadium Gate	East Gate	13:00							
		East Gate	Canada Gate	13:15							
	10	Canada Gate	West Gate	13:30							
		West Gate	Stadium Gate	13:45							
		Stadium Gate	East Gate	14:00							
		East Gate	Canada Gate	14:15							
	12	Canada Gate	West Gate	14:30							
		West Gate	Stadium Gate	14:45							
		Stadium Gate	East Gate	15:00							
		East Gate	Canada Gate	15:15							
	14	Canada Gate	West Gate	15:30							
		West Gate	Stadium Gate	15:45							
		Stadium Gate	East Gate	16:00							
		East Gate	Canada Gate	16:15							
SECOND SHIFT	16	Canada Gate	West Gate	16:30							
		West Gate	Stadium Gate	16:45							
		Stadium Gate	East Gate	17:00							
		East Gate	Canada Gate	17:15							
	18	Canada Gate	West Gate	17:30							
		West Gate	Stadium Gate	17:45							
		Stadium Gate	East Gate	18:00							
		East Gate	Canada Gate	18:15							
	20	Canada Gate	West Gate	18:30							
		West Gate	Stadium Gate	18:45							
		Stadium Gate	East Gate	19:00							
		East Gate	Canada Gate	19:15							
	22	Canada Gate	West Gate	19:30							
		West Gate	Stadium Gate	19:45							
		Stadium Gate	East Gate	20:00							
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	24	Canada Gate	West Gate	20:30							
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	26	Canada Gate	West Gate	21:30							
		West Gate	Stadium Gate	21:45							
		Stadium Gate	East Gate	22:00							
		East Gate	Canada Gate	22:15							
	28	Canada Gate	West Gate	22:30							
		West Gate	Stadium Gate	22:45							
		Stadium Gate	East Gate	23:00							
		East Gate	Canada Gate	23:15							

Operated by Progressive Building Maintenance

TOTALS ☐☐☐☐☐

Exhibit 18: Driver Trip Logs

Exhibit 19: Shuttle Bus Operation

Generally, the schedule provided sufficient time for the drivers to cover the route with little difficulty, even when experiencing a full load or unusual traffic conditions. It was really only when one of the two vehicles was being serviced that the vehicles tended to get off schedule. When a vehicle went into the garage for servicing, it was only for a couple of hours and the other vehicle was able to provide sufficient service by making a few extra runs (generally by ignoring the schedule for the short period involved).

Since the operator was not able to provide any maintenance records, it was not possible to review the amount of downtime devoted to servicing, maintenance and repair. From the driver trip logs, however, it appeared that less than one day a month was devoted to minor repairs. Since the vehicles were new, servicing was performed under warranty by Lawson Oates, a local automobile dealership. Some of the minor problems encountered included a few flat tires, electric window repairs, brake adjustments and transmission slippage. Overall, it was felt by everyone involved that very few problems were encountered with the vehicles considering that they operated fourteen hours a day for 165 days.

Although the drivers had two-way radio communications between each of the vehicles and the Manager of Progressive Building Maintenance, the radio system was considered less than successful. Because of interference

(possibly due to other radio equipment in the area), the vehicles were seldom able to communicate with each other. Only if the vehicles were only a couple of blocks away from each other were they able to communicate -- and this was seldom the case.

After initial adjustments, the wheelchair loading ramp and the wheelchair securement system worked quite satisfactorily. Initial problems were encountered with the width of the ramp which was too narrow for some wheelchairs but this was quickly corrected by increasing the width from about 27 inches to 30 inches. Several individuals commented negatively on the concept of a ramp versus a lift, but all the drivers were quite favourably disposed towards the ramp even with heavy passengers, heavy load periods or adverse weather conditions (rain).

Also, the initial wheelchair securement system consisted of standard passenger restraint belts but these were also quickly replaced with a more standard restraint system (using a combina tion of belts, hooks, D-rings, rachet buckles and floor-mounted eye-rings supplied by Aeroquip) that was similar to the one used by BC Transit on their special vehicles.

The drivers often received requests from passengers for general tourist information. In order to assist the drivers in providing the information, a drivers' newsletter was produced every Friday by the consultant. This newsletter contained general tourist information and items of interest relating to upcoming events at Expo, in the City, and around the Province. It also contained updated ridership and operational information. Copies of the newsletters are provided in Appendix B.

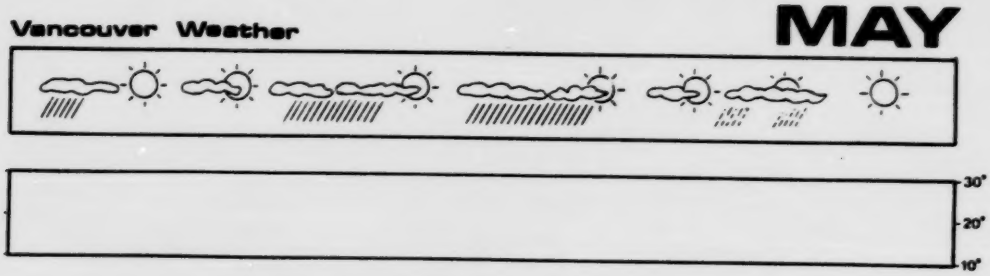
7. THE RIDERSHIP

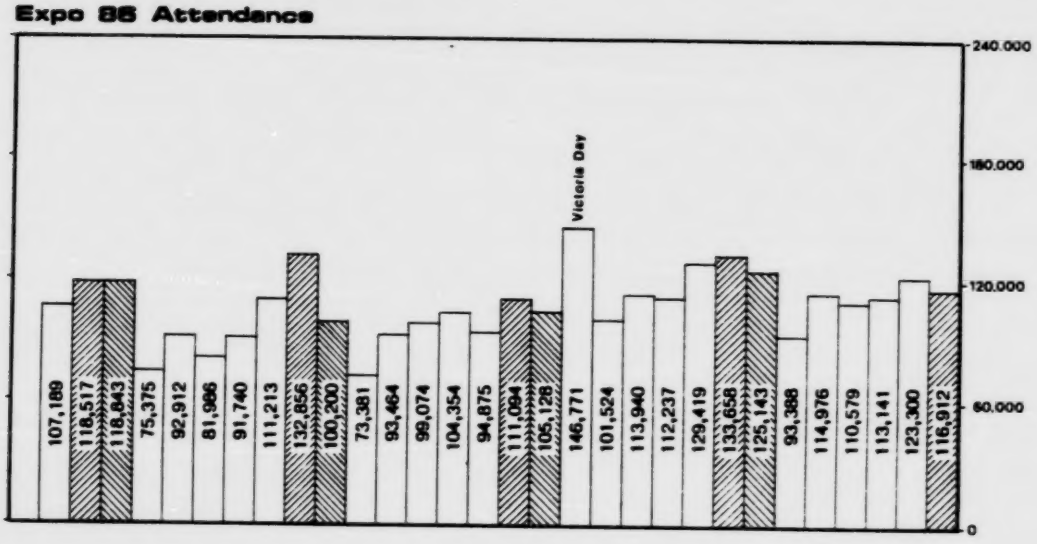
Throughout the operation of the Shuttle Bus Service, the driver trip logs were used to record the number of passengers that boarded at each stop. These ridership statistics were used to keep track of the number of persons using the service. The results of these ridership counts (and the Expo 86 attendance figures) are illustrated in Exhibit 20 on the following pages.

The total number of passengers carried by the Shuttle Bus Service during Expo 86 was 24,342 -- an average of 148 passengers a day for the 165 days of operation. In May, the average was 77 passengers a day; in June, 116; in July, 137; in August, 180; in September, 197; and in October, the average was 213 passengers a day. As can be seen, the ridership grew quite steadily over the duration of the fair. The peak was September 5th, a Friday, when 290 passengers were carried.

In comparison, the total Expo 86 attendance was 22 million. Before Expo started, the projected attendance was 13.75-million. In the heady days after the opening, projections were raised to 20 million -- matching Japan World's Fair in 1985 in Tsukuba. These totals were well ahead of the previous two fairs -- 11 million in Knoxville in 1982 and 7 million in New Orleans in 1984 -- but well short of Montreal's 50 million for Expo 67.

But Vancouver had an unusually wet May and attendance struggled to average 108,000 daily -- 20,000 short of the average needed to hit 20 million. The low point was May 13 (73,381). Things improved slightly in June. Attendance averaged 115,000 and the weather brightened. July got off on the wrong foot as rain and cold turned the Canada Day weekend into a bust. Attendance was well below expectations but not bad considering it rained quite steadily over the weekend.





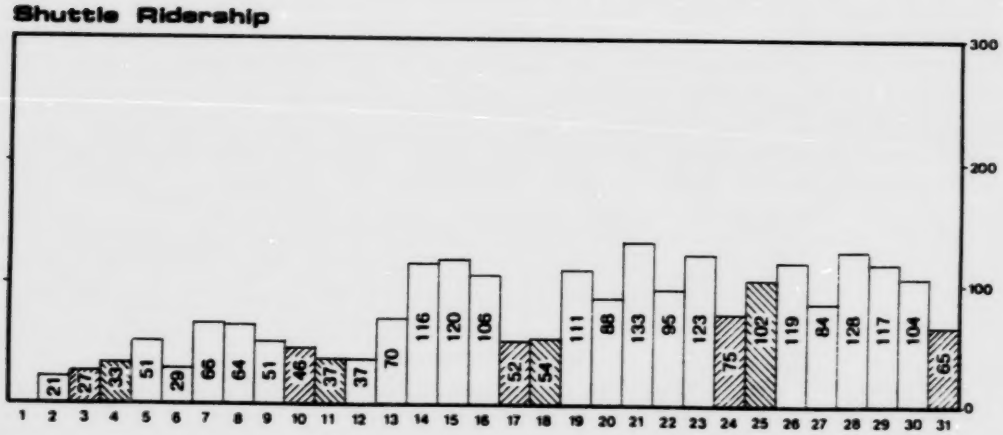


Exhibit 20: Ridership and Attendance

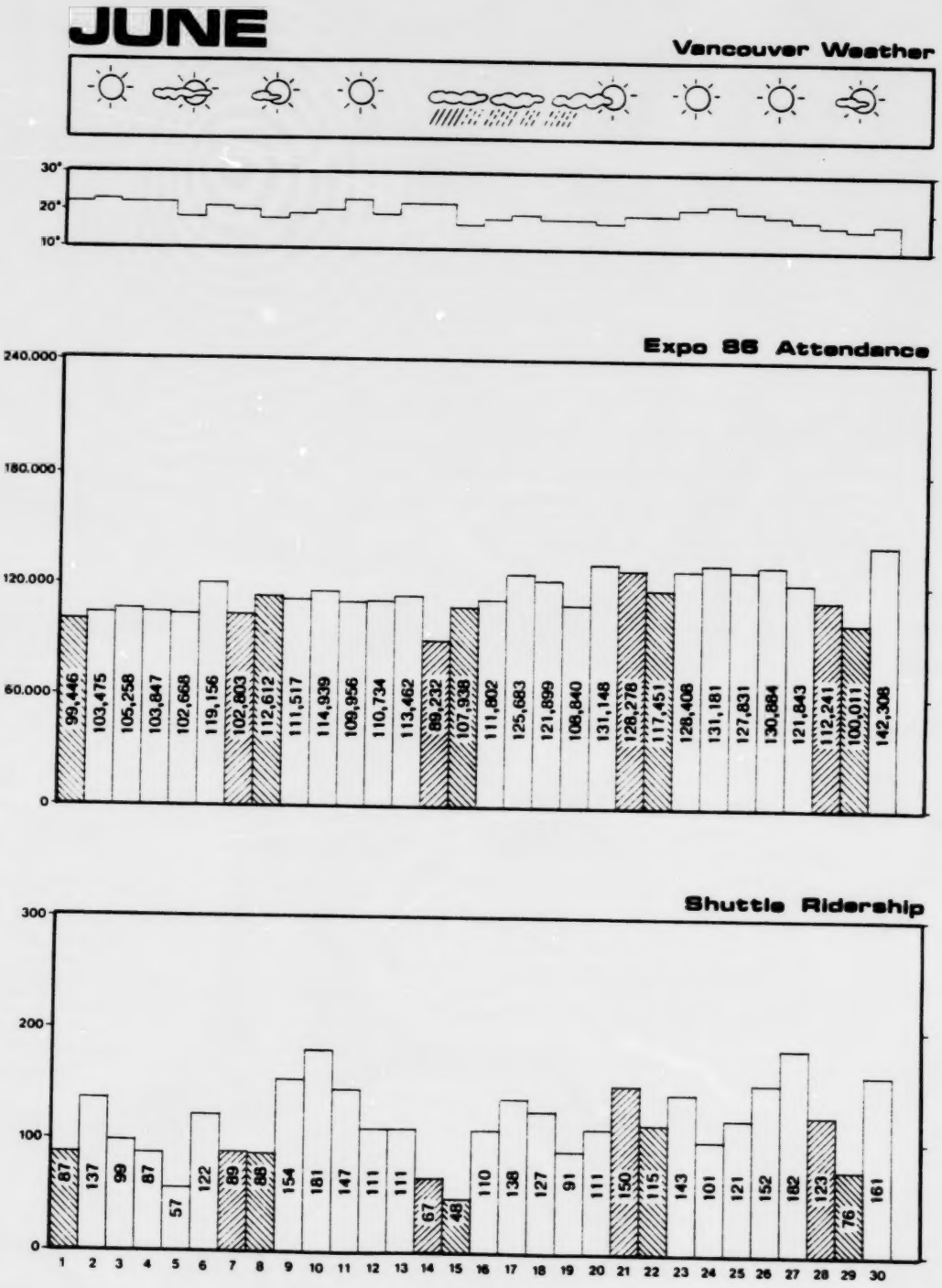
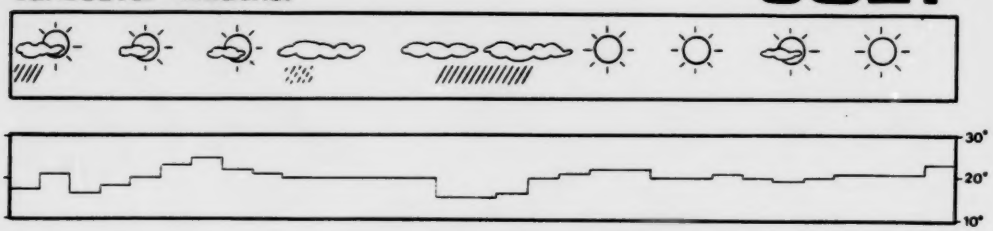
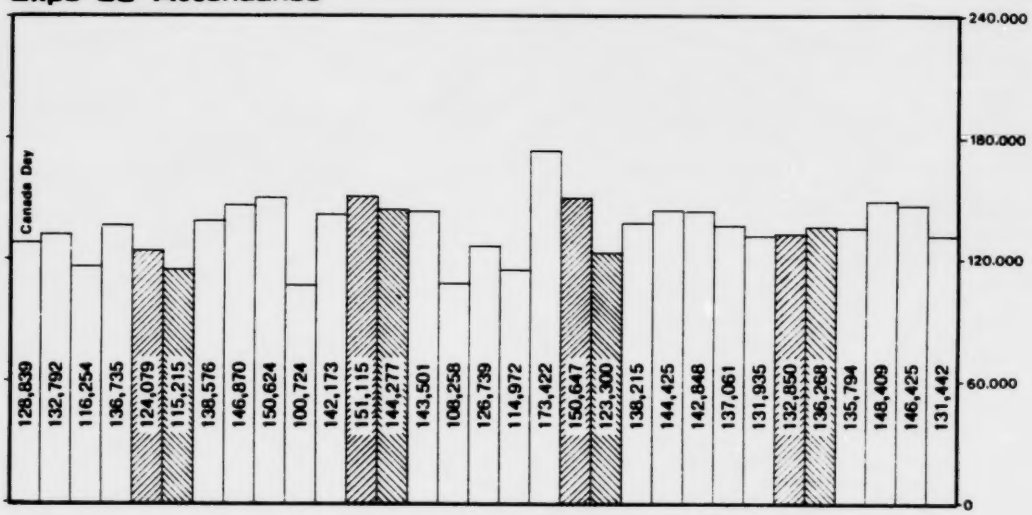


Exhibit 20: Ridership and Attendance (cont'd)

Vancouver Weather **JULY**



Expo 86 Attendance



Shuttle Ridership

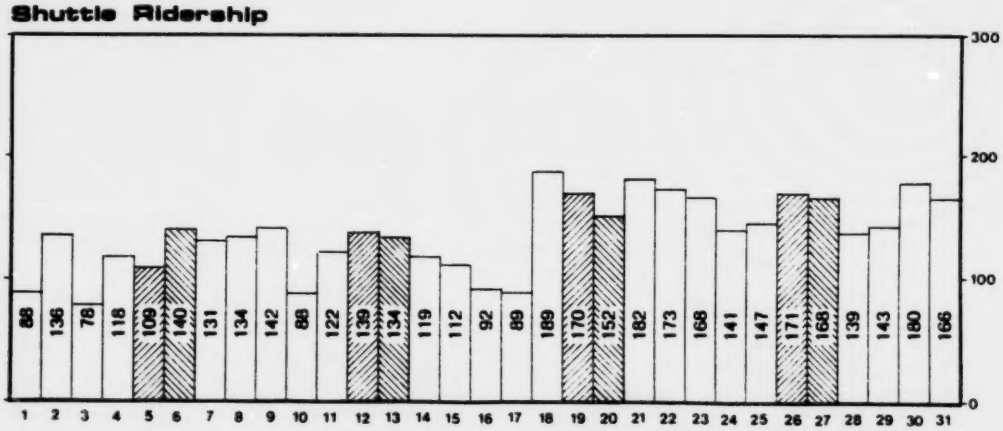


Exhibit 20: Ridership and Attendance (cont'd)

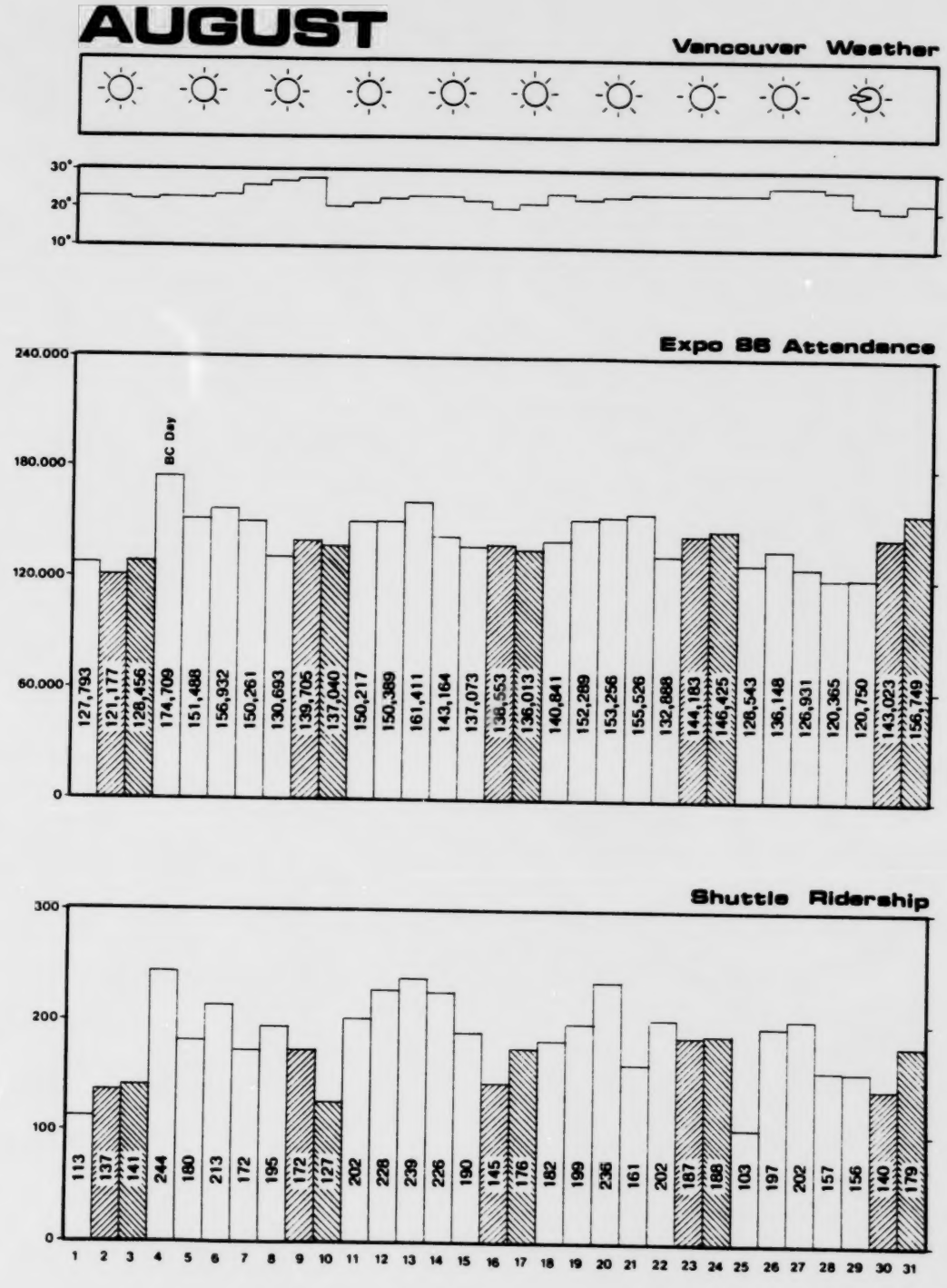
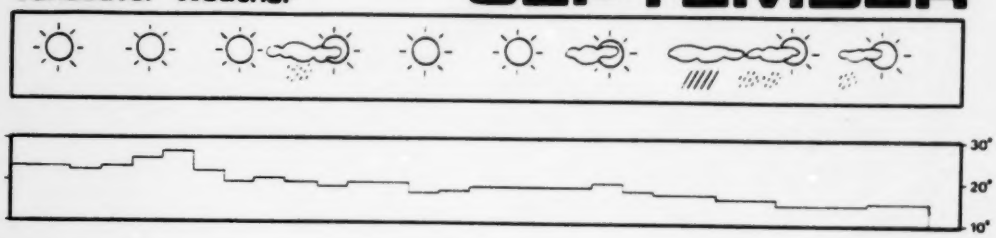
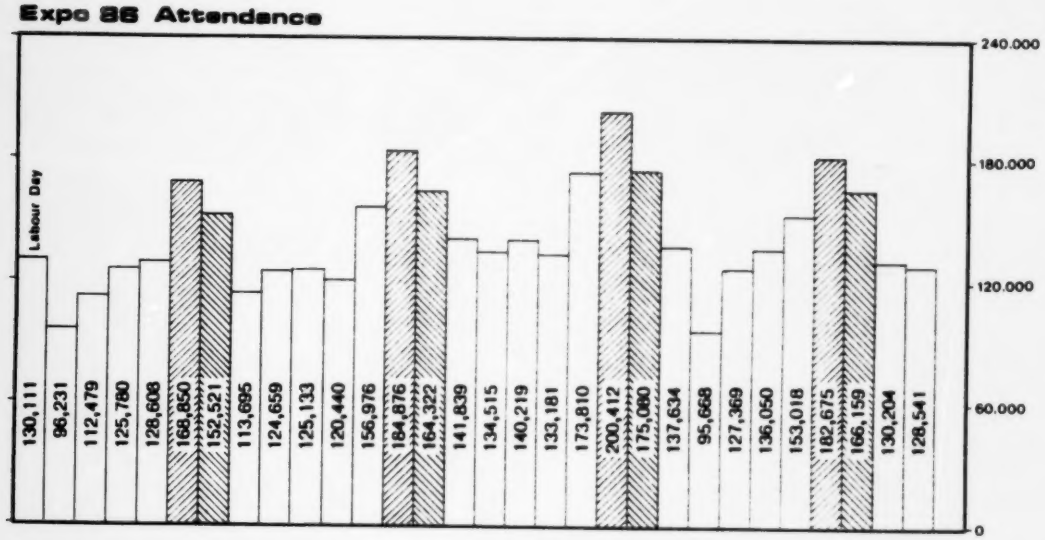


Exhibit 20: Ridership and Attendance (cont'd)

Vancouver Weather **SEPTEMBER**



Expo 86 Attendance



Shuttle Ridership

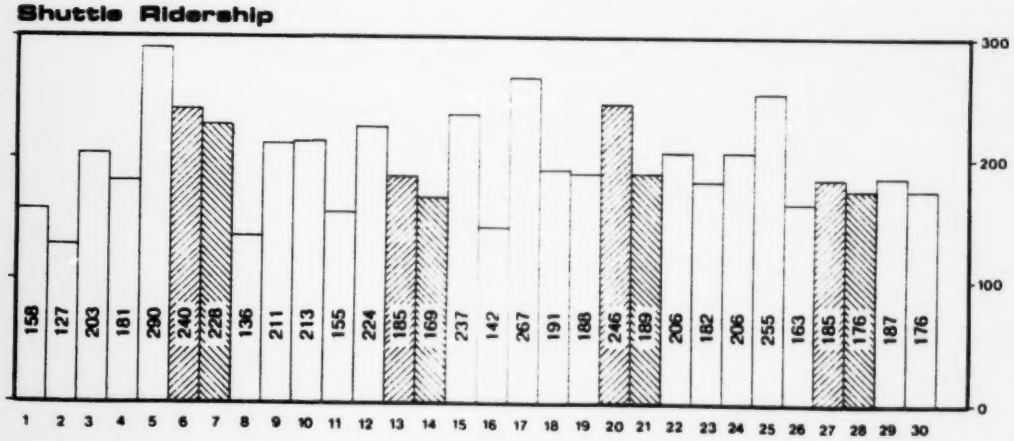


Exhibit 20: Ridership and Attendance (cont'd)

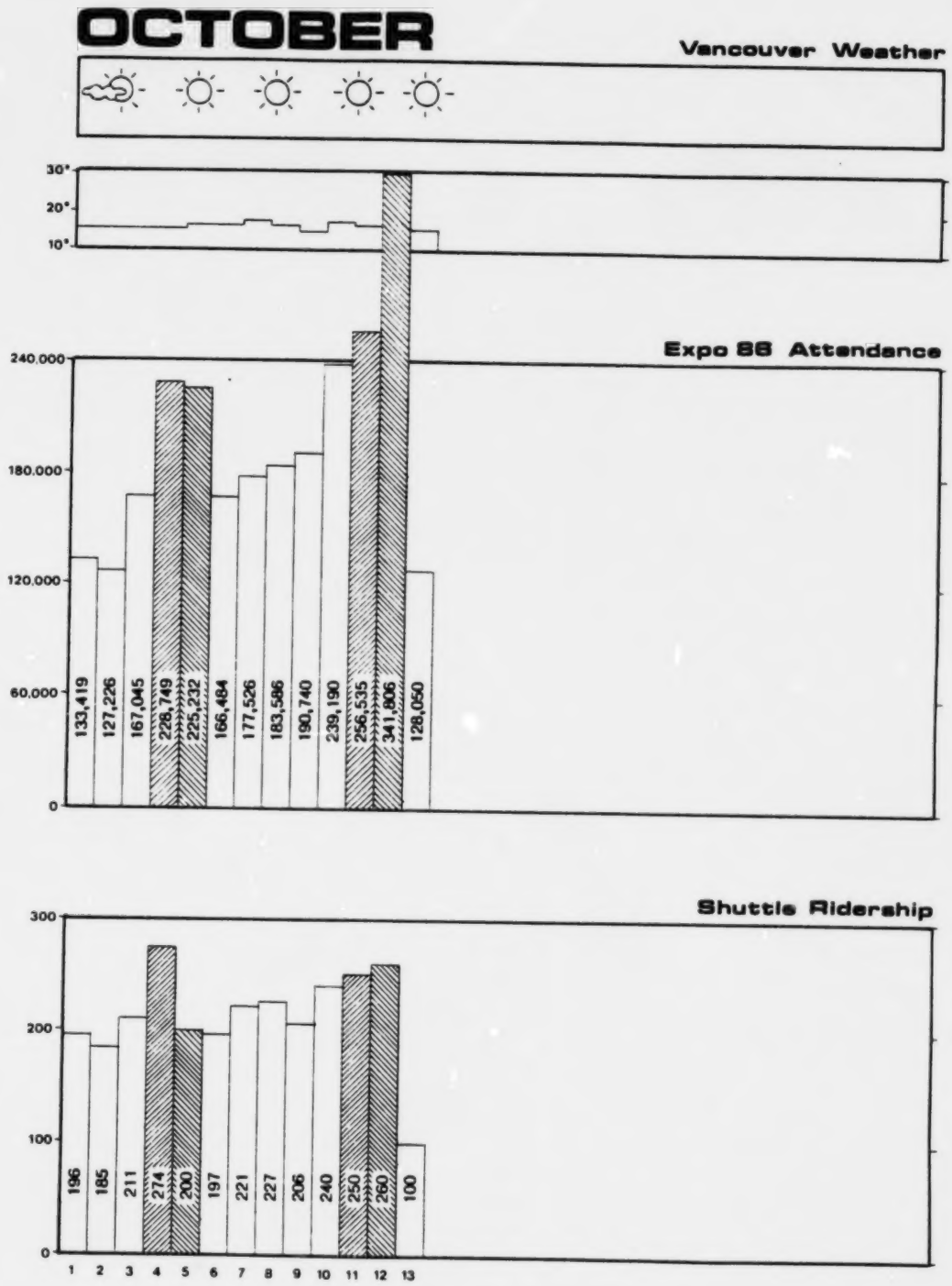


Exhibit 20: Ridership and Attendance (cont'd)

By July's end, the fair had drawn 10,888,944 visits. In August, Expo drew an average of 142,000 a day -- more than a million a week. On August 4, a new attendance high was set at 174,709. In September, throngs of tourists flocked to the world's fair despite projections that attendance would fall off. There were 4.3 million visits in September, a daily average of 142,500 -- roughly the same number as August. The October figures were also encouraging with a record daily attendance of 341,800 on the second last day. The monthly ridership and attendance figures are provided below:

	Monthly Ridership		Monthly Attendance	
	Total	Average	Total	Average
May	2,324	77	3.25 million	108,000
June	3,486	116	3.45 million	115,000
July	4,260	137	4.19 million	135,000
August	5,589	180	4.40 million	142,000
September	5,916	197	4.26 million	142,000
October	2,767	213	2.57 million	197,000

8. CHARACTERISTICS

Analysis of the driver trip logs provided some interesting characteristics of the Shuttle Bus Service. The total passenger ridership was 24,342, the kilometers travelled were 35,024 and the total hours of service were 4,615. This resulted in an average productivity of 5.27 passengers per hour and an average cost of service of $3.80 per passenger (using the $20 per hour price of the contract for operation but ignoring the fixed costs of the facilities and equipment which were donated). The average monthly ridership, productivity and cost of service are illustrated in the Exhibit on the following page.

Each of the two vehicles made 14 trips between Expo 86 and the Canada Pavilion every day, stopping at each of the four gates of Expo once every hour. In total 4,620 trips were made with 18,480 stops with an average pickup of 1.3 passengers at each stop and an average load of 5.7 passengers on each trip. Seven drivers were used to operate the vehicles, although two of the drivers left for other employment during the fair.

Throughout the operation of the Shuttle Bus Service, the drivers recorded the number of passengers that boarded at each stop and the time that the bus left the stop. The ridership statistics were used to keep track of the number of persons using the service -- mainly by the category of passenger, but also by time and location of boarding.

In this chapter the distribution of ridership is presented by passenger category, time of the day, day of week, month of the year, location of pickup point and driver of the vehicle. Three-dimensional perspectives are used to present the information so that distribution within each month and the trends between months can also be seen.

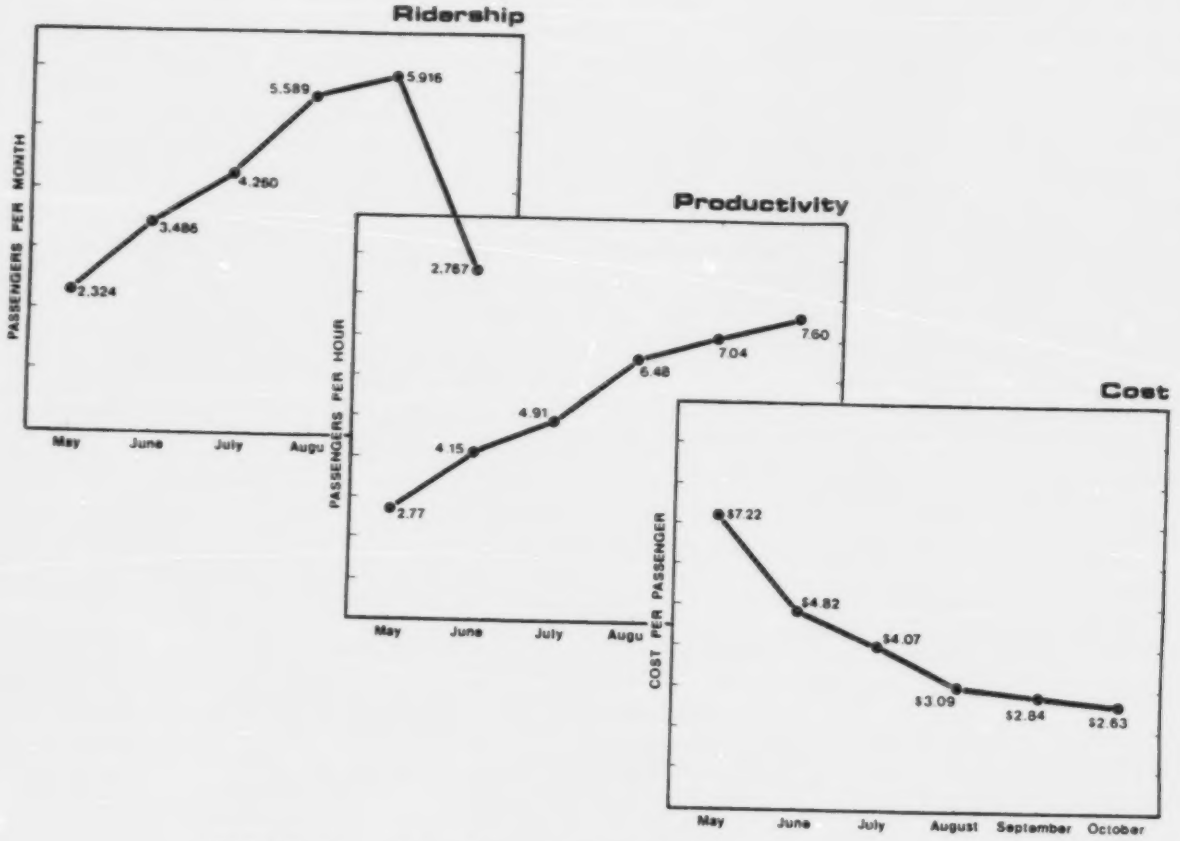


Exhibit 21: Ridership, Productivity and Cost

Identifying and categorizing riders was difficult (and possibly not too accurate). Based on the experience of the drivers, categories were defined that the majority of the drivers appeared to be familiar with. The following definitions were used when the drivers reported the number of passengers on their log sheets:

Wheelchair - number of passengers boarding the bus at a stop that are in a wheelchair.

Ambulant - number of passengers that are disabled (hearing or sight impaired, difficulty walking, difficulty reaching or grabbing, etc.) but are able to walk onto the bus.

Attendant - number of passengers that are not disabled and appear to be accompanying or travelling with a disabled or elderly person.

Seniors - number of elderly persons that do not appear to have any visible disability but are probably 65 years of age or older.

Ridership Distribution by Passenger Category

PASSENGER CATEGORY	MONTH						TOTAL	
	May	June	July	August	Sept	Oct	Number	Percent
Senior Citizens	38.12	41.25	43.00	49.56	50.89	50.00	11,320	46.50
Attendants/Escorts	27.24	24.18	25.77	23.22	20.52	20.00	5,639	23.17
Ambulatory Passenger	15.79	16.98	16.10	13.96	14.49	15.00	3,698	15.19
Wheelchair Passenger	18.85	17.58	15.12	13.26	14.10	15.00	3,685	15.14
TOTAL PASSENGERS	2,324	3,486	4,280	5,589	5,916	2,747	24,342	100.00

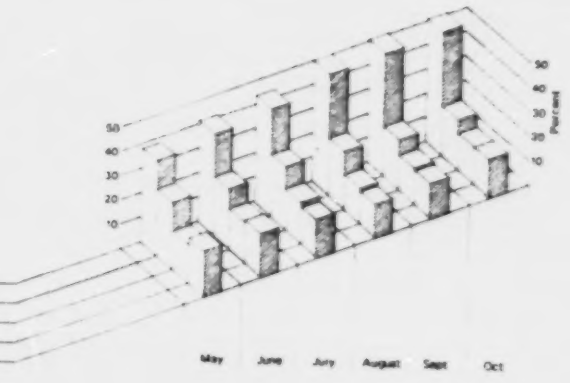


Exhibit 22: Ridership by Passenger Category

Of the 24,342 passengers, 3,685 were in wheelchairs, 3,698 were ambulatory disabled, 11,320 were senior citizens and 5,639 were attendants or escorts. Although the number of passengers in wheelchairs increased from 438 in May to 834 in September, the number of wheelchairs as a percent of total ridership decreased from 19 percent to 14 percent. One of the suspected reasons was that more ambulatory people were finding that the Shuttle Service was easier to use than either the SkyTrain or other modes.

Ridership Distribution by Day of the Week

DAY OF THE WEEK	MONTH						TOTAL	
	May	June	July	August	Sept	Oct	Number	Percent
Sunday	10.32	10.15	15.33	12.70	13.89	14.67	3,173	13.04
Monday	14.52	17.26	14.74	14.34	13.29	9.47	3,416	14.03
Tuesday	12.38	15.92	13.42	15.77	12.05	14.39	3,399	13.96
Wednesday	20.23	14.78	14.83	17.46	15.98	18.22	4,042	16.60
Thursday	18.08	12.61	11.80	14.04	14.06	12.87	3,315	13.62
Friday	14.79	18.12	14.87	13.43	15.54	14.38	3,607	14.82
Saturday	9.68	13.18	15.21	12.26	15.39	16.10	3,390	13.93
TOTAL PASSENGERS	2,324	3,486	4,280	5,589	5,916	2,747	24,342	100.00

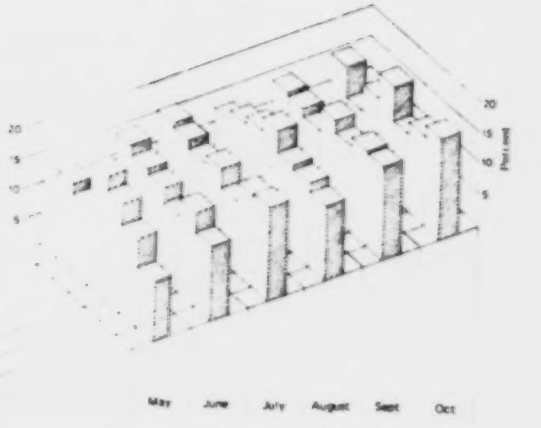


Exhibit 23: Ridership by Day of Week

Wednesday was generally the busiest day for the Shuttle Bus Service, but in June and July the peak tended to occur closer to the weekend. Although there is no discernible trend, it did appear that elderly and disabled people tended to attend the fair when attendance was low.

The passenger loading was spread out over the day. There did not seem to be any really heavy peak period. Still, the afternoon and early evening hours were a bit heavier than the early morning and late night.

Ridership Distribution by Hour of the Day

HOUR OF THE DAY	MONTH						TOTAL	
	May	June	July	August	Sept	Oct	Number	Percent
09:00 - 10:00	1.94	1.86	4.72	5.32	5.41	5.50	1,084	4.45
10:00 - 11:00	6.26	6.54	6.46	7.03	7.46	7.50	1,693	6.96
11:00 - 12:00	8.13	8.60	5.26	5.01	6.22	6.25	1,464	6.01
12:00 - 13:00	6.03	5.02	5.82	5.37	5.44	5.50	1,338	5.50
13:00 - 14:00	5.85	6.51	7.00	6.16	8.45	7.50	1,713	7.04
14:00 - 15:00	9.17	7.96	8.03	8.38	7.74	8.00	1,979	8.13
15:00 - 16:00	8.73	10.19	10.40	8.25	9.91	10.00	2,325	9.55
16:00 - 17:00	11.57	9.01	8.78	9.07	9.99	10.00	2,333	9.58
17:00 - 18:00	9.90	9.73	7.79	9.29	10.28	10.00	2,304	9.47
18:00 - 19:00	10.90	8.72	8.47	9.40	8.45	8.60	2,176	8.94
19:00 - 20:00	6.93	8.41	7.88	7.57	8.49	6.50	1,768	7.26
20:00 - 21:00	8.00	7.89	7.63	6.77	5.83	6.00	1,625	6.68
21:00 - 22:00	4.65	7.43	5.98	6.89	4.50	4.75	1,393	5.72
22:00 - 23:00	2.02	4.02	5.98	5.69	3.82	4.00	1,097	4.51
TOTAL PASSENGERS							24,342	100.00

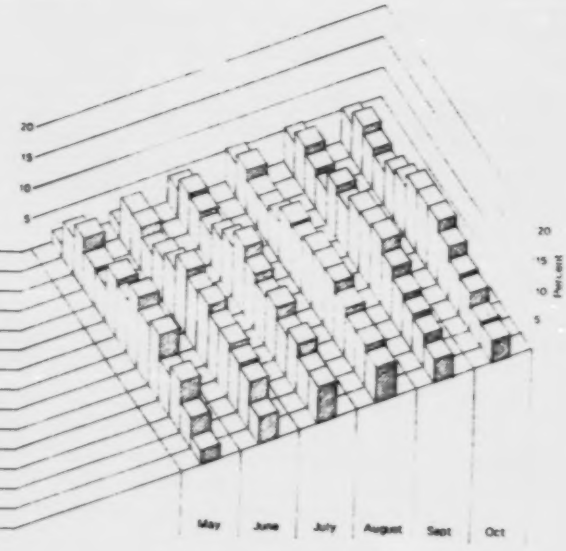


Exhibit 24: Ridership by Time of Day

Canada Gate was the most used pickup point by far, with about 61 percent of all boarding passengers. The East Gate was second with 18 percent of the passengers and the Stadium and West Gate each had 11 percent.

Ridership Distribution by Location of the Pickup

LOCATION OF THE PICKUP	MONTH						TOTAL	
	May	June	July	August	Sept	Oct	Number	Percent
Canada Gate	70.10	68.26	63.85	61.87	53.94	52.00	14,817	60.87
West Gate	1.89	3.76	12.68	10.76	15.10	16.00	2,862	10.89
Stadium Gate	1.76	3.07	11.89	14.05	12.98	14.00	2,586	10.62
East Gate	26.25	24.91	11.78	13.32	18.00	18.00	4,288	17.62
TOTAL PASSENGERS							24,342	100.00

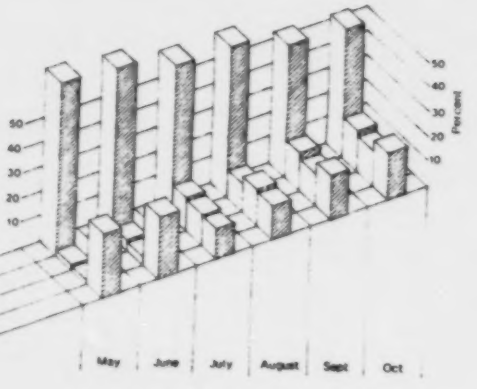


Exhibit 25: Ridership by Boarding Location

Several reason were apparent for the disproportionate number of boarding passengers at Canada Gate: the service was mainly used to travel between Canada Gate and the principal Expo site and the staff at Canada Gate were far more helpful in providing information to potential passengers than at other gates.

Finally, the distribution of ridership by vehicle driver illustrated that several drivers were far more productive than other drivers -- indicating that the attitude of the driver and the assistance provided has an effect on the ridership.

Ridership Distribution by Driver of the Vehicle

DRIVER OF THE VEHICLE	MONTH						TOTAL	
	May	June	July	August	Sept	Oct	Number	Percent
Pargat Bhandal	---	7.92	8.07	18.84	20.81	19.70	3,438	14.12
Amar Dosanjh	18.72	27.71	26.08	30.11	24.95	22.84	6,302	25.89
Patrick Mabee	18.14	13.36	13.66	11.54	---	---	2,064	8.48
Chris McCreary	15.70	12.23	18.52	16.75	21.14	21.25	4,355	17.89
Ken Mondor	17.73	12.52	14.91	7.71	17.43	17.89	3,434	14.11
Ken Swayze	14.37	8.44	---	---	---	---	629	2.58
Murray Virtue	17.34	17.92	18.76	15.35	15.67	18.32	4,120	16.93
TOTAL PASSENGERS							24,342	100.00

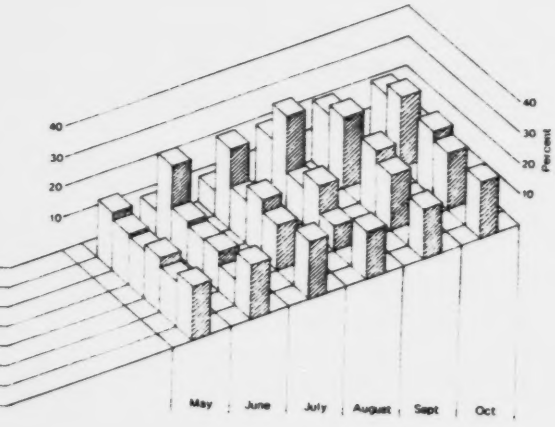


Exhibit 26: Ridership by Vehicle Driver

The average number of passengers carried every hour was 5.27. The productivity by driver seemed to depend on the time of each driver's shift -- if they had more morning shifts, their productivity seemed to be lower.

9. THE PASSENGERS

Passenger surveys were conducted at irregular intervals during the period of operation by the consultant with the majority of the surveys conducted in the month of September by individuals from the Canadian Association of Disability Communicators (the A-Team or Accessibility Team). About 425 passengers were surveyed, representing two percent of the total ridership.

The purpose of the passenger surveys was to answer such questions as: Who uses the shuttle service? How frequently do they use it? What kind of service characteristics are most important to them? What is the reaction to the offered service? How did they find out about the service? The answers to these questions were sought by means of surveys which used direct questioning of the individual as their method of data collection. The survey form that was used is illustrated on the following page.

The results of the survey are illustrated in the exhibits on the pages following the survey form and are briefly described in the following paragraphs, along with a summary of the comments that were received.

The vast majority of riders were first time users who just happened to see the vehicle, were travelling with a friend or relation, and who had no prior knowledge of the existence of this particular service. Over half of the passengers were senior citizens and only about 15 percent were people using wheelchairs. One quarter of the passengers were aware of the agency (Transport Canada) responsible for providing the service and less than ten percent used the passenger information display to determine when the vehicle would arrive at the bus stop. Just about half of the passengers were from British Columbia, with about 40 percent from the Lower Mainland and 40 percent from the United States.

SHUTTLE BUS SURVEY

HI! MY NAME IS _____. IT'S NICE TO SEE YOU USING THE SHUTTLE SERVICE. WOULD YOU MIND IF I ASKED YOU A FEW QUESTIONS TO HELP US IMPROVE THE SERVICE FOR OTHER PEOPLE LIKE YOURSELF.

THANK YOU.

Serial No. _____ Date _____ Time _____

HOW OFTEN HAVE YOU USED THE SHUTTLE SERVICE?

☐ First Time ☐ Second Time
☐ Third Time ☐ More than Three Times

HOW MANY PEOPLE ACCOMPANIED YOU ON THIS TRIP?

☐ Just Myself ☐ One Other Person
☐ Two Other People ☐ More than Three People

HOW DID YOU FIND OUT ABOUT THIS SERVICE?

☐ From a Friend ☐ Social Service Agency
☐ From Expo Staff ☐ Saw the Vehicle
☐ Saw a Sign or Poster ☐ Newspaper Article
☐ Radio or TV ☐ Other: _____

WHO DO YOU BELIEVE IS RESPONSIBLE FOR PROVIDING THIS SHUTTLE SERVICE?

☐ Expo 86 Corporation ☐ Transport Canada
☐ BC Transit ☐ BC Hydro
☐ Metro Transit (MTOC) ☐ Other: _____

HOW DID YOU GET TO EXPO FROM YOUR HOME OR THE PLACE WHERE YOU ARE STAYING?

☐ Regular Bus ☐ Taxi
☐ Charter Bus ☐ Walk
☐ HandyDART ☐ Auto as Driver
☐ SkyTrain ☐ Auto as Passenger
☐ SeaBus ☐ Other: _____

DO YOU AGREE OR DISAGREE WITH EACH OF THE FOLLOWING STATEMENTS?

	Agree	Disagree	No Opinion
There should be more buses and more frequent service	☐	☐	☐
There should be more benches and shelters at the stops	☐	☐	☐
There should be a better indication of the bus schedule	☐	☐	☐
The location of the stops could be better situated	☐	☐	☐
The vehicles could be cleaner and better maintained	☐	☐	☐
The drivers should be better trained to handle passengers	☐	☐	☐
The vehicles are well-designed and well-suited to the job	☐	☐	☐
A wheelchair lift should be used since the ramp is awkward	☐	☐	☐
The seats and interior facilities are very comfortable	☐	☐	☐
The wheelchair securement system is safe/comfortable	☐	☐	☐
In general, Expo has done a fine job in providing accessible facilities for the disabled	☐	☐	☐

DID YOU USE THE PASSENGER INFORMATION DISPLAY AT THE STOP TO SEE WHEN THE BUS ARRIVES?

☐ Did not notice the display ☐ Actually used the display to determine arrival time
☐ Noticed the display but did not understand its meaning ☐ It was not working

DO YOU HAVE ANY PHYSICAL OR OTHER CONDITIONS WHICH MAKES IT DIFFICULT TO USE A REGULAR BUS?

☐ No ☐ Yes, sitting
☐ Yes, walking ☐ Yes, seeing signs
☐ Yes, climbing stairs ☐ Yes, hearing
☐ Yes, grasping coins/handles ☐ Yes, other disability

ARE YOU USING A MOBILITY AID?

☐ Standard Wheelchair ☐ Electric Wheelchair
☐ Non-Conventional Wheelchair ☐ Crutches
☐ Walker ☐ Cane
☐ Leg or Foot Brace ☐ Other: _____

WHAT IS YOUR AGE?

☐ 10 - 15 ☐ 45 - 64
☐ 16 - 24 ☐ 65 and over
☐ 25 - 44

ARE YOU?

☐ Male ☐ Female

WHICH ONE OF THESE AREAS ARE YOU LIVING IN?

☐ Lower Mainland ☐ Ontario/Quebec
☐ Fraser Valley ☐ Maritimes
☐ Vancouver Island ☐ United States
☐ Interior B.C. ☐ Europe
☐ Northern/Coastal B.C. ☐ Asia/Japan
☐ Prairies/Yukon/NWT ☐ Other: _____

WHAT TYPE OF ACCOMMODATION DO YOU LIVE IN?

☐ Owner Occupied ☐ Rental Unit
☐ Nursing/Group Home ☐ Other: _____

PLEASE INDICATE YOUR ECONOMIC ACTIVITY?

☐ Working Full-Time ☐ Housewife
☐ Working Part-Time ☐ Student
☐ Unemployed/Seeking Work ☐ Retired
☐ Other: _____

DO YOU HAVE ANY OTHER COMMENTS OR CONCERNS THAT WILL HELP US IMPROVE THE SERVICE?

_____

_____

_____

_____

Exhibit 27: Passenger Survey Form

Perceptions

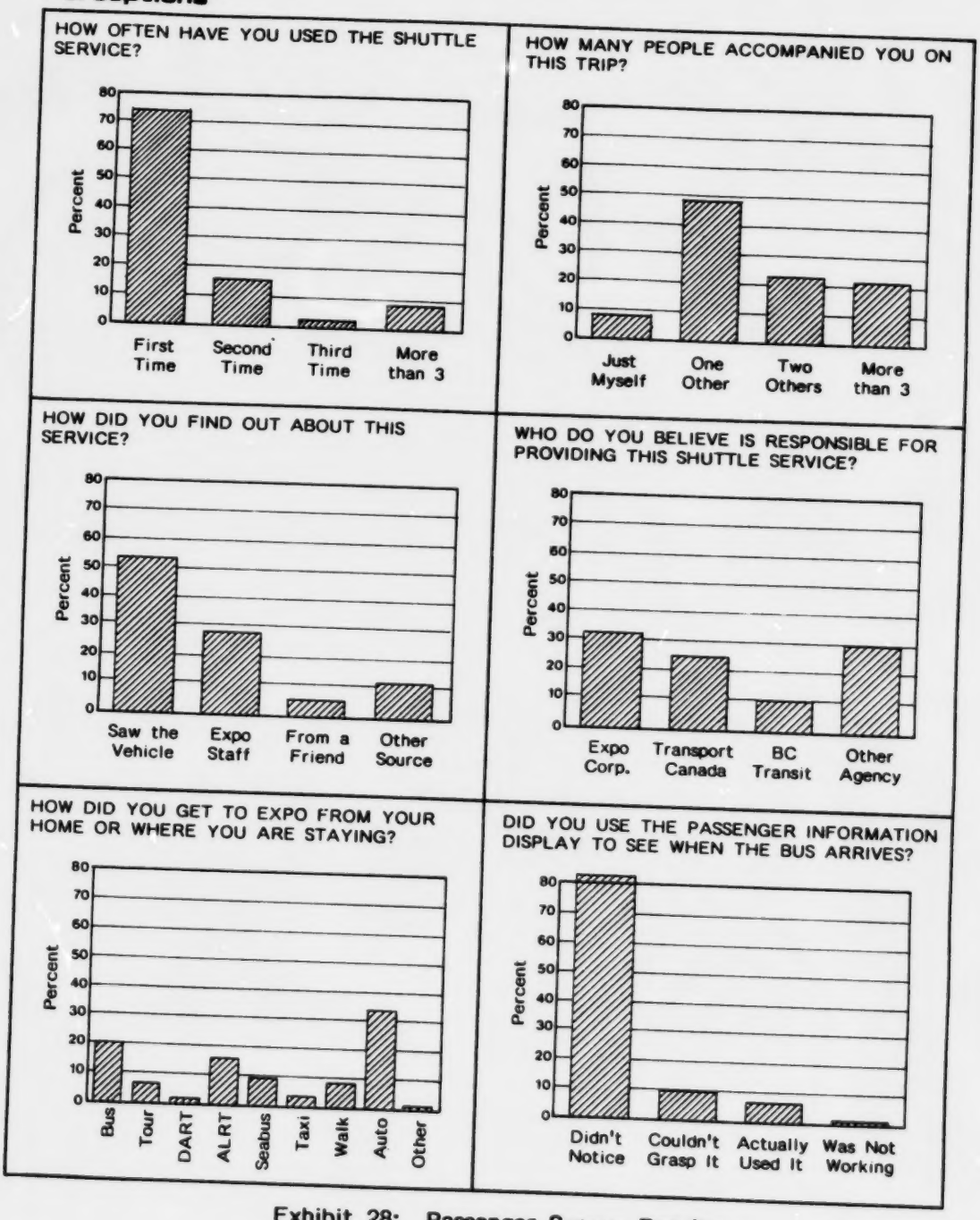


Exhibit 28: Passenger Survey Results

Attitudes

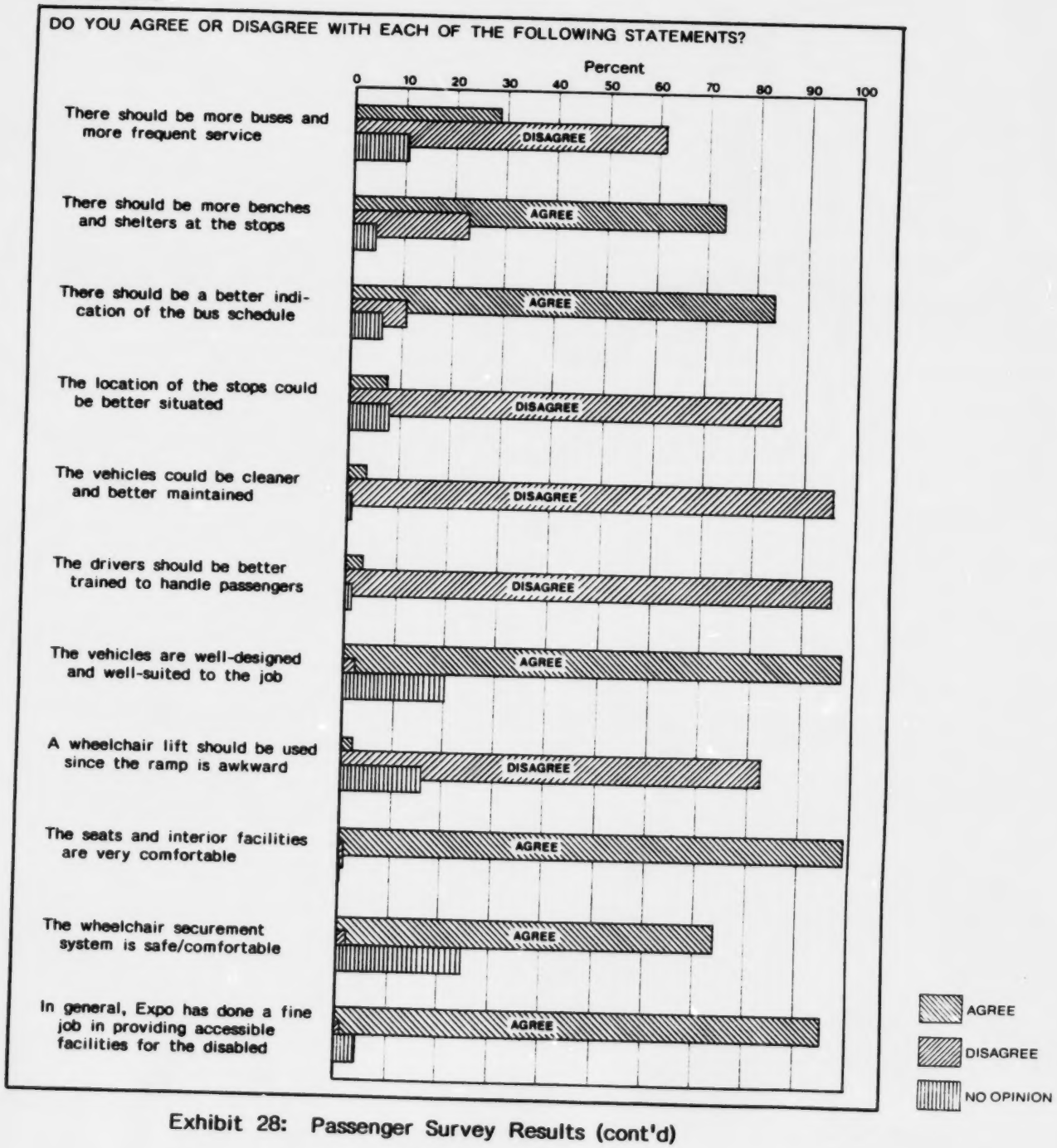
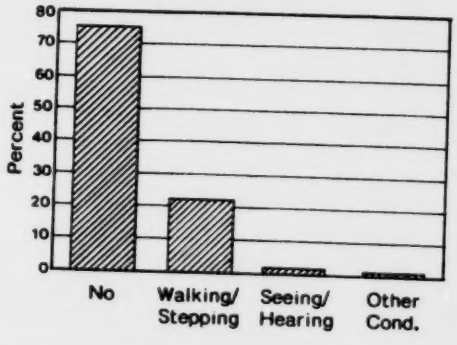

DO YOU AGREE OR DISAGREE WITH EACH OF THE FOLLOWING STATEMENTS?
Percent
0 10 20 30 40 50 60 70 80 90 100
There should be more buses and more frequent service
DISAGREE
There should be more benches and shelters at the stops
AGREE
There should be a better indication of the bus schedule
AGREE
The location of the stops could be better situated
DISAGREE
The vehicles could be cleaner and better maintained
DISAGREE
The drivers should be better trained to handle passengers
DISAGREE
The vehicles are well-designed and well-suited to the job
AGREE
A wheelchair lift should be used since the ramp is awkward
DISAGREE
The seats and interior facilities are very comfortable
AGREE
The wheelchair securement system is safe/comfortable
AGREE
In general, Expo has done a fine job in providing accessible facilities for the disabled
AGREE
AGREE
DISAGREE
NO OPINION

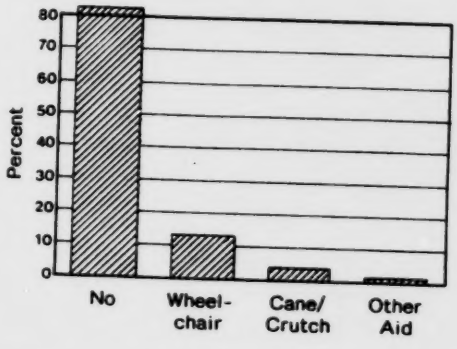
Exhibit 28: Passenger Survey Results (cont'd)

Characteristics

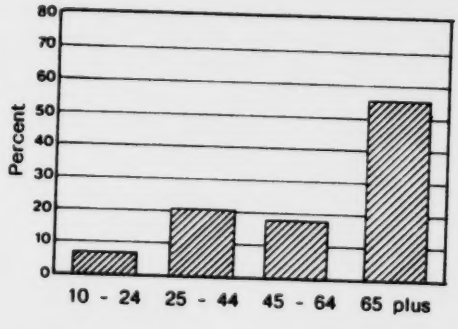
DO YOU HAVE ANY PHYSICAL CONDITION WHICH MAKES IT DIFFICULT TO USE A BUS?



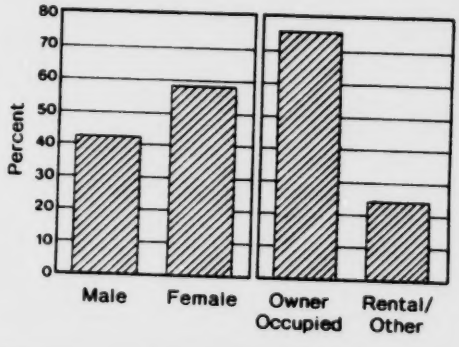
ARE YOU USING A MOBILITY AID?



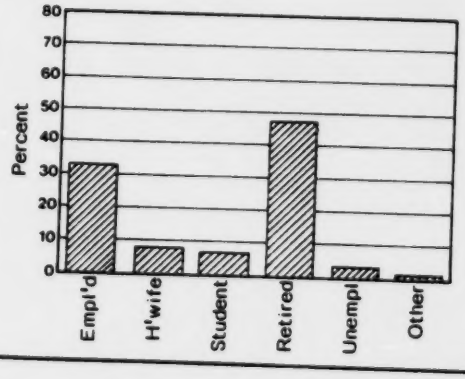
WHAT IS YOUR AGE?



WHAT IS YOUR SEX AND WHAT TYPE OF ACCOMMODATION DO YOU LIVE IN?



PLEASE INDICATE YOUR ECONOMIC ACTIVITY?



WHICH ONE OF THESE AREAS DO YOU LIVE?

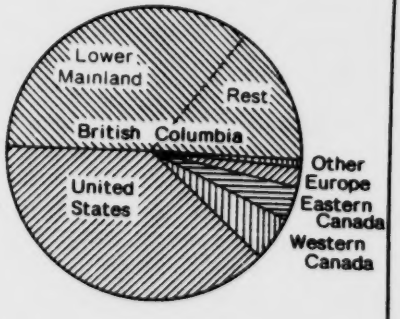


Exhibit 28: Passenger Survey Results (cont'd)

In general, the passengers were extremely satisfied with the vehicles and their interior facilities. There seemed to be less satisfaction, however, with the services at the bus stops. Most passengers felt that there should be a better indication of the service and its schedule at the stops, and that there should be benches and shelters provided at the stops.

Often if the bus driver had no elderly or disabled passengers, he would take aboard able-bodied persons, if they happened to ask if they could ride this particular shuttle bus. As a result, passengers often expressed difficulty in responding to some of the questions in this survey as they had no knowledge about this service (i.e. where the buses stopped, etc.)

Publicity: The most frequently expressed criticism was the lack of publicity and advertising about this service as many riders said they would have used this service earlier if they had only known about it -- in spite of the fact that:

- the majority of handicapped associations in the lower mainland were provided with a complete information package on the Transport Canada sponsored demonstration projects at Expo 86, including a description of the intersite shuttle service, the Accessobus and the SCAT vehicles at the Canada Pavilion.
- signage was provided at each shuttle stop (i.e. the Videobus displays showing times of arrival of the bus at the stop and the route of the bus along the Expo site).
- as large as possible sign (limited by the window size) was placed on the vehicle itself.
- complete information packages were sent to the Expo 86 Corporation. Even so, staff at the Information Centres did not appear to know about this service and told people with disabilities to take the SkyTrain to get to the Canada Pavilion, which is not fully accessible (most of the passengers were informed about the service from Canada Pavilion staff).
- an information package was sent to IBM for inclusion in the IBM information displays on site (but was never actually included).

Part of the reason for the lack of awareness of the service was the fact that a very large percentage of the users were not from British Columbia.

Passenger Information Display: Very few of the passengers actually noticed or used the Videobus information display. One criticism was that the display board was too high off the ground for people with disabilities to view. Some also remarked that the times were wrong and that the display was too vague to have much meaning. It would appear a more detailed bus schedule regarding the service posted at each stop would possibly have been of greater assistance to guests.

Bus Schedule: Most passengers felt that half-hour service was adequate. A few expressed a desire for more frequent service during peak hours at Expo 86 (i.e. midday) although the bus was rarely completely full for any

one run. It was noted that the bus driver would frequently permit able-bodied persons aboard particularly if the bus had no one on it and there were seats available or if the person asked the driver if he/she could ride the bus.

Shelters and Benches: Many elderly passengers would have liked shelters and benches at each stop.

Drivers' Concerns: The bus drivers frequently had difficulty with vehicles (particularly taxis) stopping at their bus stop and, on several occasions, they had to leave the bus to tell the driver of the offending vehicle to move. Perhaps the sign indicating no stopping could have included on it or else your car will be towed away! People seemed to just disregard the sign especially if they were waiting to pick up someone from Expo 86. Having to continually ask the people to move their cars created unnecessary delays and concerns for the drivers.

On the whole, however, the vast majority of the passengers were very pleased about the shuttle bus service. Most felt that the vans were well designed for the job, clean, comfortable and that the drivers were very courteous. Most people felt that Expo 86 had done a good job in providing accessible facilities for the disabled.

Lastly, many passengers wanted to know what was going to be done with the vans once Expo 86 was over as they felt they were excellent for transporting the elderly and the disabled.

10. CONCLUSIONS

It was concluded that the Transport Canada Intersite Shuttle Bus Service was a very successful and worthwhile contribution to Expo 86. It allowed elderly and disabled Expo visitors to travel conveniently between the various gates of Expo 86 and it ensured that the Canadian Pavilion was an accessible and barrier-free place to visit.

The total passenger ridership was 24,342 (an average of 148 passengers a day for the 165 days of operation, or little over a thousand a week), the kilometres travelled were 35,024 and the total hours of service were 4,615. This resulted in an average productivity of 5.27 passengers per hour.

The total operating cost of the service to Transport Canada was about $90,000, or an average of $3.80 per passenger. This compares extremely favourably to other special services for disabled passengers where a cost of $20 per passenger is not unusual. Contributing to the low cost of the service was the donation of the vehicles by Get-Away Enterprises Inc. who were responsible for providing vehicles that met with the immediate approval of Transport Canada, the Canada Pavilion and the vast majority of passengers.

The design department of Get-Away developed a vehicle that met and exceeded all expectations. The innovative design of the folding ramp proved to a trouble-free design for high volume usage in a shuttle operation and the high-quality of the interiors provided a pleasant and comfortable ride for the passengers. The vehicles, in fact, were the aspect most frequently cited for favourable comment.

The most frequently expressed criticism was the lack of publicity and

advertising about the service. Most passengers were only made aware of the service when they saw the vehicles, although the Expo staff at Canada Gate were quite helpful in directing passengers with special needs to the vehicle stop. It became obvious that special on-the-spot signage was required to inform people about the service but this was not possible with the regulations imposed on street signage.

Very few of the passengers actually noticed or used the Videobus passenger information display. One comment was that the display board was too high off the ground for people with disabilities to view. Some also remarked that the times were wrong and that the display was too vague to have much meaning. The display also had technical difficulties at the beginning which adversely affected the users perception of the display.

All the drivers indicated that they preferred the ramp as opposed to a lift, suggesting that the ramp worked well in spite of passengers weight, heavy load periods or adverse weather conditions. The ramp was trouble free throughout the fair (a lift. on the other hand, would probably have had mechanical failures of one sort or another). Another point in favour of a ramp on a shuttle bus is the reduced boarding times that result when a number of people (not all of which are in wheelchairs) are boarding at one stop at one time -- they can just walk on directly.

It was concluded that the Transport Canada shuttle bus service was a very successful and worthwhile contribution to Expo 86. It allowed elderly and disabled visitors to travel conveniently between the various gates of Expo and it ensured that the Canadian Pavilion was an accessible and barrier-free place to visit. The results illustrated that government, business and associations for the disabled can work together to produce a viable and needed service for elderly and disabled persons at special events using high-quality equipment.

APPENDIX A: OPERATIONAL SUMMARIES

DAILY OPERATIONAL SUMMARY

MAY

DATE		DAY OF WEEK	EXPO ATTENDANCE		SHUTTLE BUS RIDERSHIP										SERVICE PROVIDED				ON-TIME PERFORMANCE								WEATHER		REMARKS
					DAILY					CUMULATIVE					KILOMETERS		HOURS		TIMES LATE				TIMES EARLY						
			DAILY	CUMULATIVE	WHEELCHAIR	AMBULANT	ATTENDANT	OTHER	TOTAL	WHEELCHAIR	AMBULANT	ATTENDANT	OTHER	TOTAL	DAILY	CUMULATIVE	DAILY	CUMULATIVE	5-10 min	10-20 min	20-30 min	> 30 min	5-10 min	10-20 min	20-30 min	> 30 min	WEATHER	TEMP	
MAY	01																												
	02	Fri	107,189	107,189	—	5	8	14	27	—	5	8	14	27	250	250	28	28	15	15	17	8	9	6	6	9	Rain		
	03	Sat	118,317	225,306	8	5	10	7	27	8	10	18	21	57	278	528	28	56	6	14	9	31	5	12	7	20	Sunny	23°	
	04	Sun	118,843	344,949	9	8	15	6	33	17	18	33	27	90	272	800	28	84	6	8	21	21	10	13	4	10	Sunny		
	05	Mon	78 775	423,724	11	12	16	12	51	28	30	49	39	141	226	1,026	28	112	11	12	10	36	8	5	9	0	Sunny		
	06	Tue	72,912	496,636	3	9	8	9	29	31	39	57	48	170	230	1,256	28	140	9	12	10	36	8	5	9	0	Sunny		
	07	Wed	81,186	577,822	19	10	16	11	56	50	49	73	59	226	233	1,489	28	168	9	15	12	12	12	21	6	0	Sunny		
	08	Thu	91,740	669,562	9	13	13	29	64	59	62	86	88	290	245	1,734	28	196	8	6	6	44	6	12	6	10	Cloudy		
	09	Fri	111,213	780,775	9	9	14	19	51	68	71	100	107	341	260	1,994	28	224	7	11	10	15	8	9	6	36	Cloudy		
	10	Sat	132,856	913,631	6	12	13	15	46	74	83	113	122	387	253	2,247	28	252	3	5	6	36	6	6	13	34	Rain		
	11	Sun	100,800	1,014,431	9	6	14	8	37	83	89	127	130	424	253	2,500	28	280	11	15	14	19	9	7	7	24	Rain		
	12	Mon	73,381	1,087,812	7	7	13	10	37	90	96	140	140	461	251	2,751	28	308	5	9	8	69	11	20	18	10	Rain		
	13	Tue	73,464	1,161,276	11	12	21	21	70	101	108	161	161	531	243	2,994	28	336	2	8	1	0	9	17	11	42	Cloudy		
	14	Wed	99,074	1,260,350	25	13	35	93	166	126	121	200	254	648	267	3,823	28	364	6	15	6	0	4	20	14	40	Rain		
	15	Thu	109,354	1,369,704	25	22	28	95	180	143	148	228	299	768	253	3,478	28	392	8	11	7	3	4	11	7	38	Rain		
	16	Fri	94,875	1,464,579	21	9	31	37	106	164	157	257	286	874	211	3,689	28	420	9	2	0	0	12	15	4	7	Rain		
	17	Sat	111,094	1,667,073	6	11	15	20	52	170	168	272	306	926	266	3,955	28	448	5	9	2	0	2	8	8	4	Rain		
	18	Sun	105,128	1,772,201	9	6	20	19	54	179	174	292	325	980	201	4,156	28	476	10	0	0	0	4	4	4	12	Rain		
	19	Mon	146,771	1,858,972	30	16	38	27	111	209	190	330	352	1,091	236	4,392	28	504	8	5	2	0	61	9	6	39	Rain		VICTORIA DAY
	20	Tue	101,529	1,960,736	24	14	17	33	88	233	204	347	385	1,179	216	4,608	28	532	3	3	9	8	16	6	5	21	Sunny/Cool		
	21	Wed	113,940	2,074,436	23	20	34	34	133	256	224	381	419	1,312	224	4,832	28	560	3	0	0	0	8	10	12	41	Sunny/Cool		
	22	Thu	112,237	2,186,793	21	9	22	23	75	277	233	403	484	1,397	222	5,054	28	588	0	1	0	0	11	17	17	49	Sunny/Cool		
	23	Fri	159,419	2,346,212	26	12	30	29	103	303	245	433	390	1,530	192	5,246	28	644	4	0	0	0	15	46	9	0	Cloudy/Cool		
	24	Sat	133,668	2,479,880	18	12	18	29	75	345	257	451	365	1,605	201	5,447	28	699	5	0	0	0	11	2	0	1	Rain/Cool		
	25	Sun	105,143	2,585,023	11	12	19	60	102	326	269	488	425	1,707	209	5,656	28	672	6	0	0	0	3	6	2	1	Variable/Warm		
	26	Mon	93,388	2,678,401	18	31	28	42	119	344	300	516	467	1,626	210	5,866	28	700	6	1	0	0	9	20	2	0	Rain/Warm		
	27	Tue	119,976	2,783,377	21	19	23	26	89	365	319	539	493	1,716	210	6,076	28	728	6	19	0	0	0	9	1	0	Sunny/Warm		
	28	Wed	110,579	2,893,956	24	13	29	62	128	389	332	568	555	1,844	207	6,283	28	756	9	13	1	0	29	9	2	0	Sunny/Warm		
	29	Thu	113,191	3,007,097	19	10	21	66	117	408	337	589	621	2,155	205	6,488	28	784	7	9	0	0	46	3	2	0	Sunny/Warm		
	30	Fri	123,300	3,130,397	23	14	29	43	109	431	351	618	664	2,264	212	6,700	28	812	14	8	1	1	7	2	0	0	Sunny/Warm		
	31	Sat	116,912	3,247,309	7	16	20	22	65	438	367	638	686	2,329	216	6,916	28	840	8	3	0	0	6	2	2	0	Sunny/Warm		
TOTALS			3,247,309	3,247,309	438	367	633	686	2,329	438	367	633	886	2,329	6,916	6,916	840	840	178	220	146	383	279	287	194	117			

DAILY OPERATIONAL SUMMARY

JUNE

DATE		DAY OF WEEK	EXPO ATTENDANCE		SHUTTLE BUS RIDERSHIP										SERVICE PROVIDED				ON-TIME PERFORMANCE								WEATHER		REMARKS
					DAILY					CUMULATIVE					KILOMETERS		HOURS		TIMES LATE				TIMES EARLY						
			DAILY	CUMULATIVE	WHEELCHAIR	AMBULANT	ATTENDANT	OTHER	TOTAL	WHEELCHAIR	AMBULANT	ATTENDANT	OTHER	TOTAL	DAILY	CUMULATIVE	DAILY	CUMULATIVE	5-10 min	10-20 min	20-30 min	> 30 min	5-10 min	10-20 min	20-30 min	> 30 min	WEATHER	TEMP	
JUNE	01	Sun	99,446	3,346,755	14	12	27	34	87	452	379	660	720	2,211	222	7,138	28	868	8	1	1	0	5	2	0	0	Sunny	22°	
	02	Mon	103,475	3,450,230	24	21	29	63	137	476	400	689	783	2,348	216	7,354	28	896	27	17	0	0	6	0	0	0	Sunny	23°	
	03	Tue	105,258	3,555,488	25	14	33	27	99	501	414	722	810	2,447	207	7,561	28	924	27	8	0	0	3	1	0	0	Sunny	22°	
	04	Wed	103,847	3,659,335	22	19	24	22	87	523	433	746	832	2,534	218	7,779	24	952	20	8	1	0	40	3	1	0	Partly Cloudy	22°	
	05	Thu	102,668	3,762,003	12	7	19	19	57	535	440	765	851	2,791	197	7,978	28	980	14	5	2	4	1	1	2	8	Partly Cloudy	18°	
	06	Fri	119,156	3,881,159	24	18	28	52	122	559	458	793	903	2,913	215	8,193	28	1,008	19	3	0	0	1	0	0	0	Partly Cloudy	21°	
	07	Sat	102,803	3,983,962	15	16	15	43	89	574	474	808	1146	3,002	226	8,419	28	1,036	8	2	0	0	2	2	1	0	Partly Cloudy	20°	
	08	Sun	112,612	4,096,574	17	16	25	30	88	591	490	833	1176	3,090	212	8,631	28	1,064	8	2	0	0	2	3	2	0	Partly Cloudy	18°	
	09	Mon	111,517	4,208,091	30	27	30	57	144	621	517	873	1233	3,244	191	8,822	28	1,092	19	4	4	2	6	4	4	4	Sunny	19°	
	10	Tue	114,939	4,323,030	23	18	16	70	181	644	535	889	1303	3425	216	9,038	28	1,120	17	3	0	0	3	1	1	0	Sunny	20°	
	11	Wed	109,956	4,432,986	18	24	34	63	147	662	559	923	1366	3572	205	9,243	28	1,148	3	2	0	0	11	4	1	0	Sunny	23°	
	12	Thu	110,734	4,543,720	18	16	29	53	111	678	615	971	1419	3,683	209	9,452	28	1,176	3	2	1	2	2	1	2	1	Sunny	19°	
	13	Fri	113,462	4,657,182	19	20	20	52	111	697	635	991	1471	3,794	223	9,675	28	1,204	14	1	0	0	3	5	2	29	Sunny	22°	
	14	Sat	89,232	4,746,414	10	15	25	17	67	707	650	1016	1488	3861	213	9,888	28	1,232	16	4	3	4	3	3	4	14	Heavy Rain	22°	
	15	Sun	107,938	4,854,352	7	15	10	16	48	714	665	1026	1504	3909	212	10,075	28	1,260	12	3	0	0	3	2	2	0	Showers	16°	
	16	Mon	111,802	4,966,514	17	29	23	41	110	731	694	1049	1545	4,019	217	10,312	28	1,288	21	5	0	0	5	2	5	14	Showers	18°	
	17	Tue	125,683	5,091,837	37	16	33	52	138	768	710	1082	1597	4,157	150	10,462	28	1,316	3	6	0	38	2	3	1	10	Showers	18°	
	18	Wed	121,899	5,213,736	23	11	22	71	127	791	721	1104	1668	4,284	119	10,581	28	1,344	11	3	0	0	0	0	0	0	Showers	19°	
	19	Thu	108,840	5,322,576	12	10	17	52	91	803	731	1121	1720	4,375	181	10,822	28	1,372	2	1	0	0	1	0	0	0	Showers	18°	
	20	Fri	131,148	5,453,724	22	20	31	38	111	825	751	1152	1758	4486	192	11,014	28	1400	2	0	0	0	1	2	0	0	Showers	18°	
	21	Sat	128,278	5,582,002	18	30	27	75	150	843	781	1179	1833	4636	208	11,222	28	1428	20	1	0	0	2	1	0	0	Partly Cloudy	17°	
	22	Sun	117,451	5,699,453	21	11	34	97	115	864	792	1213	1930	4751	211	11,433	28	1,456	19	4	0	0	1	1	1	0	Partly Cloudy	19°	
	23	Mon	128,408	5,827,861	12	25	29	82	193	876	817	1242	1965	4894	210	11,643	28	1,484	12	3	0	0	1	1	1	0	Partly Cloudy	19°	
	24	Tue	131,181	5,959,042	17	9	27	48	101	893	826	1269	2013	4995	221	11,864	28	1,512	13	3	0	0	1	0	0	0	Sunny	21°	
	25	Wed	127,831	6,086,873	21	9	31	61	121	914	835	1296	2071	5116	217	12,081	28	1,540	9	2	0	0	1	2	1	0	Sunny	22°	
	26	Thu	130,884	6,217,757	32	16	44	58	152	946	851	1340	2129	5266	209	12,285	28	1,568	14	3	0	0	2	0	0	0	Sunny	19°	
	27	Fri	121,843	6,339,600	36	31	43	72	182	982	882	1383	2201	5,450	212	12,497	28	1,596	2	0	0	0	6	4	4	5	Sunny	18°	
	28	Sat	112,241	6,451,841	22	25	31	45	123	1004	907	1414	2246	5,573	209	12,706	28	1,624	4	1	0	0	2	1	2	0	Cloudy	17°	NEW LOG SHEETS
	29	Sun	100,011	6,551,852	19	14	25	18	76	1023	921	1439	2264	5,649	197	12,903	28	1,652	8	3	0	0	0	0	0	0	Showers	16°	
	30	Mon	142,348	6,694,160	28	30	35	60	161	1051	939	1474	2324	5,840	209	13,112	28	1,680	9	2	0	0	0	1	1	0	Partly Cloudy	17°	
	31																												
TOTALS			3,446,851	6,694,160	653	592	905	1139	3486	1051	939	1474	2324	5810	6,916	13,112	840	1,680	265	109	12	76	73	51	38	90			

DAILY OPERATIONAL SUMMARY

JULY

DATE		DAY OF WEEK	EXPO ATTENDANCE		SHUTTLE BUS RIDERSHIP										SERVICE PROVIDED				ON-TIME PERFORMANCE								WEATHER		REMARKS
					DAILY					CUMULATIVE					KILOMETERS		HOURS		TIMES LATE				TIMES EARLY						
			DAILY	CUMULATIVE	WHEELCHAIR	AMBULANT	ATTENDANT	OTHER	TOTAL	WHEELCHAIR	AMBULANT	ATTENDANT	OTHER	TOTAL	DAILY	CUMULATIVE	DAILY	CUMULATIVE	5-10 min	10-20 min	20-30 min	> 30 min	5-10 min	10-20 min	20-30 min	> 30 min	WEATHER	TEMP	
JULY	01	Tue	128,839	6,822,999	11	13	22	42	88	4062	932	1490	2386	8,898	215	13,327	28	1,708	7	1	0	0	2	3	2	0	Rain	17°	Canada Day
	02	Wed	132,792	6,955,791	21	20	37	58	136	4083	952	1535	2444	9,014	206	13,533	28	1,736	2	1	0	0	1	1	2	0	Partly Cloudy	21°	
	03	Thu	116,294	7,072,085	13	16	20	29	78	4096	968	1555	2473	9,112	199	13,732	28	1,764	5	0	0	0	1	1	2	0	Partly Sunny	16°	
	04	Fri	136,735	7,208,780	8	39	15	56	118	4104	1007	1570	2529	9,230	207	13,939	28	1,792	0	0	0	0	0	0	0	0	Sunny	18°	INDEPENDENCE DAY (USA)
	05	Sat	189,079	7,332,859	13	34	25	37	109	4117	1041	1595	2566	9,319	215	14,154	28	1,820	3	2	0	0	0	0	0	0	Rain Showers	20°	
	06	Sun	165,245	7,498,074	22	15	32	31	100	4139	1056	1627	2597	9,419	209	14,363	28	1,848	0	0	0	0	0	0	0	0	Sunny	23°	
	07	Mon	138,576	7,586,650	10	28	20	23	131	4149	1084	1647	2620	9,610	209	14,572	28	1,876	3	1	0	0	0	2	0	0	Sunny	25°	
	08	Tue	146,870	7,733,520	21	18	31	64	134	4170	1102	1678	2684	9,744	204	14,776	28	1,904	1	1	0	0	1	1	2	0	Partly Cloudy	22°	
	09	Wed	150,629	7,884,149	19	24	15	89	147	4189	1126	1693	2773	9,881	207	14,983	28	1,932	1	1	0	0	1	1	2	0	Partly Cloudy	21°	
	10	Thu	180,124	7,991,868	18	11	24	38	88	4177	1137	1707	2881	9,998	198	15,183	28	1,960	3	0	0	0	1	2	0	0	Rain Showers	20°	
	11	Fr.	142,173	8,127,041	24	13	18	37	122	4223	1190	1765	2918	10,096	206	15,389	28	1,988	2	0	0	0	1	2	1	0	Cloudy	20°	
	12	Sat	151,115	8,278,156	18	31	27	61	137	4241	1221	1794	2979	10,235	209	15,598	28	2,016	1	1	0	0	0	0	0	0	Cloudy, Sun	20°	
	13	Sun	194,277	8,472,433	29	13	33	59	134	4270	1234	1827	3038	10,369	207	15,800	28	2,044	0	0	0	0	0	0	0	0	Partly Cloudy	20°	
	14	Mon	143,501	8,565,934	20	18	34	47	119	4290	1252	1861	3085	10,488	207	16,007	28	2,072	0	1	0	0	0	2	0	0	Partly Cloudy	20°	
	15	Tue	108,258	8,674,192	15	17	29	51	112	4305	1269	1890	3136	10,600	209	16,216	28	2,100	0	2	0	0	1	3	0	0	Rain	15°	
	16	Wed	126,739	8,800,931	11	15	17	49	92	4316	1284	1907	3185	10,692	209	16,425	28	2,128	0	2	0	0	0	3	0	0	Rain	15°	
	17	Thu	134,932	8,935,903	8	12	16	53	89	4324	1296	1923	3238	10,781	208	16,633	28	2,156	1	1	0	0	1	2	0	0	Rain	16°	
	18	Fr.	173,422	9,089,325	20	34	47	88	189	4344	1330	1970	3326	10,970	209	16,842	28	2,184	0	0	0	0	1	2	0	0	Sunny	20°	
	19	Sat	150,647	9,239,972	11	50	39	70	170	4355	1380	2009	3396	11,140	211	17,053	28	2,212	2	2	0	0	0	0	0	0	Sunny	21°	
	20	Sun	123,300	9,363,272	37	13	45	55	152	4392	1393	2064	3451	11,292	192	17,245	28	2,240	0	0	0	0	0	0	0	0	Sunny	22°	
	21	Mon	138,215	9,501,487	39	21	19	73	182	4433	1414	2143	3524	11,474	212	17,457	28	2,268	1	1	0	0	0	0	0	0	Sunny	22°	CANADA DAY CELEBRATIONS (Shuttle bus Duties)
	22	Tue	144,425	9,645,912	31	25	36	61	173	4464	1439	2179	3585	11,647	217	17,674	28	2,296	1	1	0	0	3	2	0	0	Cloudy, Rain	20°	
	23	Wed	142,840	9,788,760	23	37	18	60	148	4487	1476	2239	3645	11,815	200	17,874	28	2,324	0	0	0	0	1	2	0	0	Sunny	20°	
	24	Thu	137,061	9,925,821	26	19	47	99	191	4513	1495	2294	3694	11,996	201	18,075	28	2,352	0	0	0	0	0	3	2	5	Sunny	21°	
	25	Fri	131,935	10,057,756	34	14	47	52	147	4547	1509	2301	3746	12,103	206	18,281	28	2,380	0	0	0	0	0	0	0	0	Sunny	20°	
	26	Sat	132,850	10,190,606	27	14	48	82	171	4574	1523	2383	3828	12,274	205	18,486	28	2,408	0	2	0	0	0	0	0	0	Sunny	19°	
	27	Sun	136,268	10,326,874	22	29	37	60	148	4596	1552	2406	3888	12,442	207	18,693	28	2,436	0	0	0	0	0	0	0	0	Sunny / Cldy	20°	
	28	Mon	135,794	10,462,668	20	32	35	52	139	4616	1584	2441	3940	12,581	211	18,904	28	2,464	0	0	0	0	1	1	0	0	Cldy, Storms	21°	
	29	Tues	148,909	10,611,577	19	16	31	77	143	4635	1600	2472	4017	12,724	207	19,111	28	2,492	1	1	0	0	1	0	0	0	Sunny/Cldy	21°	
	30	Wed	146,425	10,757,202	25	24	44	87	180	4660	1624	2559	4104	12,904	226	19,337	28	2,520	1	1	0	0	0	0	0	0	Sunny	21°	
	31	Thu	131,992	10,889,194	35	21	38	52	146	4695	1645	2574	4156	13,070	208	19,545	28	2,548	1	1	0	0	0	0	0	0	Sunny	23°	
TOTALS			4,194,784	10,889,194	699	686	1018	1852	4260	4695	1645	2574	4156	13,070	6933	19,545	868	2,548	36	23	0	0	17	33	13	5			

DAILY OPERATIONAL SUMMARY

AUGUST

DATE		DAY OF WEEK	EXPO ATTENDANCE		SHUTTLE BUS RIDERSHIP										SERVICE PROVIDED				ON-TIME PERFORMANCE								WEATHER		REMARKS
					DAILY					CUMULATIVE					KILOMETERS		HOURS		TIMES LATE				TIMES EARLY						
			DAILY	CUMULATIVE	WHEELCHAIR	AMBULANT	ATTENDANT	OTHER	TOTAL	WHEELCHAIR	AMBULANT	ATTENDANT	OTHER	TOTAL	DAILY	CUMULATIVE	DAILY	CUMULATIVE	5-10 min	10-20 min	20-30 min	> 30 min	5-10 min	10-20 min	20-30 min	> 30 min	WEATHER	TEMP	
AUGUST	01	Fr.	127,793	11,016,737	26	18	36	33	113	1721	663	868	1489	10,483	229	19,169	28	2576	1	0	0	0	0	0	0	0	Sunny	23°	
	02	Sat	121,177	11,137,914	19	28	45	45	137	1740	691	1535	1634	10,320	204	19,373	28	2604	1	1	0	0	0	0	0	0	Sunny	23°	
	03	Sun	128,456	11,266,370	12	24	21	84	141	1752	1715	2636	4318	10,461	210	20,183	28	2632	0	1	0	0	1	0	0	0	Sunny	22°	
	04	Mon	174,709	11,441,079	33	46	59	106	244	1785	1761	2735	4424	10,705	211	20,394	28	2660	0	0	0	0	2	1	0	0	Sunny	22°	BC DAY
	05	Tue	151,488	11,592,567	24	28	51	77	180	1809	1789	2786	4501	10,885	199	20,593	28	2688	0	4	0	0	0	0	3	1	Sunny	22°	
	06	Wed	156,932	11,749,499	29	35	55	94	213	1838	1824	2841	4595	11,098	192	20,785	28	2716	1	1	2	9	2	1	0	0	Sunny	23°	
	07	Thu	150,261	11,899,760	22	25	35	90	172	1860	1849	2876	4685	11,270	208	20,993	28	2744	1	3	0	0	0	0	0	0	Sunny	26°	
	08	Fr.	130,693	12,030,453	37	29	60	69	195	1897	1878	2936	4754	11,465	209	21,202	28	2772	0	0	0	0	0	0	0	0	Sunny	27°	
	09	Sat	139,705	12,170,158	26	29	55	62	172	1923	1907	2991	4816	11,637	212	21,414	28	2800	1	1	0	0	0	0	0	0	Sunny	28°	
	10	Sun	137,040	12,307,198	18	11	23	75	127	1941	1918	3014	4891	11,764	213	21,627	28	2828	0	0	0	0	0	0	0	0	Overcast	20°	
	11	Mon	150,217	12,460,915	28	33	49	86	202	1969	1951	3063	4977	11,966	208	21,835	28	2856	3	2	0	0	2	0	0	0	Overcast	21°	
	12	Tue	150,389	12,610,804	22	34	60	112	228	1991	1991	3123	5089	12,194	201	22,036	28	2884	1	1	0	0	0	0	0	0	Overcast	22°	
	13	Wed	161,411	12,772,215	31	25	67	116	239	2022	2016	3190	5205	12,433	213	22,249	28	2912	0	2	0	0	0	1	0	0	Sunny	23°	Leg°
	14	Thu	143,164	12,915,379	33	26	38	129	226	2055	2042	3228	5334	12,659	206	22,455	28	2940	0	0	0	0	2	1	0	0	Sunny	25°	
	15	Fr.	137,073	13,052,452	21	33	48	88	190	2076	2075	3276	5422	12,849	209	22,664	28	2968	1	2	0	0	1	1	1	0	Sunny	22°	
	16	Sat	138,553	13,191,005	19	20	32	74	145	2095	2095	3308	5496	12,994	193	22,857	29	2992	0	0	0	0	0	0	0	0	Sunny	20°	Rain Showers
	17	Sun	136,013	13,327,018	32	16	39	89	176	2127	2111	3347	5585	13,170	210	23,067	28	3020	0	0	0	0	3	4	0	0	Sunny	21°	
	18	Mon	140,841	13,467,859	24	22	45	91	182	2151	2133	3392	5676	13,352	203	23,270	28	3048	0	6	1	1	2	0	0	0	Sunny	24°	Showers
	19	Tue	152,889	13,620,748	21	21	46	111	199	2172	2154	3438	5787	13,551	206	23,476	28	3076	1	1	0	0	2	0	0	0	Sunny	22°	
	20	Wed	153,256	13,773,404	28	11	39	138	236	2200	2165	3477	5965	13,787	190	23,666	28	3104	0	1	0	0	1	4	3	4	Sunny	23°	Showers
	21	Thu	155,526	13,928,930	15	34	33	79	161	2215	2199	3510	6029	13,948	212	23,878	28	3132	0	0	0	0	1	3	2	3	Sunny	24°	Showers
	22	Fr.	132,888	14,061,818	26	26	43	107	202	2241	2225	3553	6131	14,150	201	24,079	28	3160	0	0	0	0	0	0	0	0	Sunny	24°	
	23	Sat	144,183	14,206,001	16	32	36	103	187	2257	2257	3589	6234	14,337	203	24,282	27	3187	0	0	0	0	0	0	0	0	Sunny	24°	
	24	Sun	146,425	14,352,426	18	29	34	107	188	2275	2286	3623	6341	14,525	206	24,494	28	3215	0	0	0	0	0	0	0	0	Sunny	24°	
	25	Mon	128,543	14,480,969	16	16	19	52	103	2291	2302	3642	6393	14,628	198	24,692	28	3243	0	0	0	0	2	1	0	0	Sunny	24°	
	26	Tue	136,148	14,617,117	34	18	45	100	197	2325	2320	3687	6493	14,825	206	24,898	28	3271	1	1	0	0	0	0	0	0	Sunny	26°	
	27	Wed	126,731	14,744,048	27	24	45	104	202	2352	2346	3732	6597	15,027	221	25,119	28	3299	0	1	0	0	3	2	0	0	Sunny	26°	
	28	Thu	120,365	14,864,413	16	15	23	103	157	2368	2361	3755	6700	15,184	207	25,328	28	3327	0	1	0	0	0	0	0	0	Sun/Cldy	25°	
	29	Fr.	120,750	14,985,163	26	23	42	65	156	2394	2384	3797	6765	15,340	219	25,547	28	3355	0	1	0	0	1	1	0	0	Overcast	21°	
	30	Sat	143,423	15,128,586	17	13	30	80	140	2411	2397	3827	6845	15,480	214	25,761	28	3383	0	0	0	0	1	0	0	0	Overcast	20°	
	31	Sun	156,749	15,284,935	25	28	45	81	179	2436	2425	3872	6926	15,659	214	25,975	28	3411	0	0	0	0	1	0	0	0	Sunny	22°	
TOTALS			4,336,991	15,284,935	741	780	1186	2778	5489	2436	2425	3872	6926	15,659	6930	25,975	863	3911	12	30	3	10	30	20	9	8			

DAILY OPERATIONAL SUMMARY

SEPTEMBER

DATE		DAY OF WEEK	EXPO ATTENDANCE		SHUTTLE BUS RIDERSHIP										SERVICE PROVIDED				ON-TIME PERFORMANCE								WEATHER		REMARKS
					DAILY					CUMULATIVE					KILOMETERS		HOURS		TIMES LATE				TIMES EARLY						
			DAILY	CUMULATIVE	WHEELCHAIR	AMBULANT	ATTENDANT	OTHER	TOTAL	WHEELCHAIR	AMBULANT	ATTENDANT	OTHER	TOTAL	DAILY	CUMULATIVE	DAILY	CUMULATIVE	5 - 10 min	10 - 20 min	20 - 30 min	> 30 min	5 - 10 min	10 - 20 min	20 - 30 min	> 30 min	WEATHER	TEMP	
SEPT	01	Mon	130,111	15,145,046	19	35	36	68	158	2455	2660	3588	6994	15697	229	26,179	28	3,939	0	0	0	0	0	0	0	0	Sunny	23°	LABOUR DAY
	02	Tue	96,231	15,241,277	19	9	32	67	127	2474	2669	3620	7061	15824	210	26,389	28	3,967	0	1	0	0	0	0	0	0	Sunny	23°	
	03	Wed	112,479	15,643,756	67	13	51	112	203	2501	2682	3671	7173	16,147	211	26,600	28	3,995	1	1	0	0	0	3	0	0	Sunny	22°	
	04	Thu	125,780	15,769,536	68	31	38	94	191	2569	2713	4029	7267	16,328	209	26,809	28	3,523	0	0	0	0	1	1	0	0	Sunny	23°	
	05	Fri	128,608	15,898,144	54	30	81	125	290	2573	2743	4110	7392	16,618	207	27,036	28	3,551	0	0	0	0	1	2	0	0	Sunny	25°	
	06	Sat	168,850	16,066,994	34	32	99	125	290	2607	2775	4159	7517	16,858	211	27,247	28	3,579	0	0	0	0	2	0	0	0	Sunny	27°	
	07	Sun	157,821	16,199,515	38	37	54	99	228	2645	2812	4213	7616	17,086	205	27,452	28	3,607	0	0	0	0	2	0	0	0	Sunny	22°	
	08	Mon	113,695	16,313,210	11	29	19	77	136	2656	2841	4232	7693	17,222	205	27,657	28	3,635	0	0	0	0	0	0	0	0	Sunny Shs	19°	
	09	Tue	124,639	16,437,849	35	23	38	115	211	2691	2864	4270	7826	17,933	207	27,864	28	3,663	2	0	0	0	0	0	0	0	Cloudy	20°	
	10	Wed	125,133	16,562,002	22	22	40	129	213	2713	2886	4310	7909	17,646	206	28,070	28	3,691	2	0	0	0	0	0	0	0	Sunny	19°	
	11	Thu	120,440	16,682,442	17	35	31	72	155	2730	2921	4341	8029	17,801	208	28,278	28	3,719	0	0	0	0	0	0	0	0	Sun, Showers	18°	
	12	Fri	166,976	16,849,418	38	43	47	96	224	2768	2964	4388	8125	18,245	217	28,495	28	3,747	0	0	0	0	0	0	0	0	Sun, Showers	19°	
	13	Sat	184,876	17,035,294	36	36	44	69	185	2804	3000	4432	8194	18,210	207	28,702	28	3,775	0	0	0	0	1	0	0	0	Rather Shs	19°	
	14	Sun	164,382	17,199,676	11	33	16	107	169	2815	2833	4448	8263	18,379	207	28,909	28	3,803	0	0	0	0	1	0	0	0	Sunny	17°	
	15	Mon	141,839	17,331,455	23	38	18	112	237	2844	2881	4496	8375	18,646	207	29,116	28	3,831	0	0	0	0	0	0	0	0	Sunny	17°	
	16	Tue	134,515	17,465,970	11	46	19	96	192	2855	2897	4515	8471	18,738	214	29,330	28	3,859	1	1	0	0	1	0	0	0	Sunny	18°	
	17	Wed	140,219	17,606,189	32	31	37	167	267	2887	2928	4552	8638	19,025	208	29,538	28	3,887	0	2	0	0	0	0	0	0	Sunny	18°	
	18	Thu	133,181	17,739,370	28	24	91	98	191	2915	2952	4593	8736	19,246	217	29,755	28	3,915	0	0	0	0	1	0	0	0	Cloudy Shs	18°	
	19	Fri	173,810	17,913,180	30	37	36	85	188	2945	2989	4629	8821	19,384	212	29,967	28	3,943	0	0	0	0	0	0	0	0	Cloudy Shs	18°	
	20	Sat	200,412	18,113,592	36	39	59	112	246	2981	3028	4688	8933	19,650	211	30,178	28	3,971	0	0	0	0	1	1	0	0	Cloudy Shs	19°	
	21	Sun	175,080	18,288,672	33	32	42	82	189	3014	3060	4730	9015	19,819	211	30,389	28	3,999	1	1	0	0	0	0	0	0	Cloudy Shs	17°	
	22	Mon	137,634	18,426,306	24	45	30	107	206	3038	3105	4760	9142	20,045	211	30,600	28	4,027	0	0	0	0	0	0	0	0	Cloudy	16°	
	23	Tue	95,668	18,521,974	32	10	54	86	182	3070	3115	4814	9228	20,227	208	30,808	28	4,055	0	0	0	0	0	0	0	0	Rain	16°	
	24	Wed	127,369	18,649,343	30	26	43	107	206	3100	3141	4857	9335	20,433	221	31,029	28	4,083	0	0	0	0	0	0	0	0	Cloudy	15°	
	25	Thu	136,050	18,785,393	39	47	46	128	255	3139	3188	4903	9463	20,693	208	31,237	28	4,111	0	0	0	0	0	0	0	0	Cloudy	15°	
	26	Fri	153,018	18,938,411	20	17	28	98	163	3159	3205	4931	9561	20,851	211	31,448	28	4,139	0	0	0	0	0	0	0	0	Cloudy Shs	19°	
	27	Sat	182,675	19,121,086	33	24	37	91	185	3187	3229	4968	9652	21,036	205	31,653	28	4,167	0	0	0	0	0	0	0	0	Cloudy Shs	19°	
	28	Sun	166,159	19,287,245	28	28	46	74	176	3215	3257	5014	9726	21,212	210	31,863	28	4,195	0	0	0	0	0	0	0	0	Cloudy Shs	14°	
	29	Mon	130,204	19,417,449	29	15	41	102	187	3244	3272	5055	9828	21,399	215	32,078	28	4,223	0	0	0	0	0	0	0	0	Sun n Cloud	15°	
	30	Tue	128,541	19,545,990	26	10	31	109	176	3270	3282	5086	9931	21,575	209	32,287	28	4,251	0	0	0	0	0	0	0	0	Cloud, Shs	15°	
	31																												
TOTALS			4,261,055	19,545,990	839	887	1124	3011	5961	3270	3282	5086	9931	21,575	6,312	32,287	840	4,251	7	6	0	0	9	7	0	0			

DAILY OPERATIONAL SUMMARY

OCTOBER

DATE		DAY OF WEEK	EXPO ATTENDANCE		SHUTTLE BUS RIDERSHIP										SERVICE PROVIDED				ON-TIME PERFORMANCE								WEATHER		REMARKS
					DAILY					CUMULATIVE					KILOMETERS		HOURS		TIMES LATE				TIMES EARLY						
			DAILY	CUMULATIVE	WHEELCHAIR	AMBULANT	ATTENDANT	OTHER	TOTAL	WHEELCHAIR	AMBULANT	ATTENDANT	OTHER	TOTAL	DAILY	CUMULATIVE	DAILY	CUMULATIVE	5 - 10 min	10 - 20 min	20 - 30 min	> 30 min	5 - 10 min	10 - 20 min	20 - 30 min	> 30 min	WEATHER	TEMP	
OCT	01	Wed	133,419	19,679,409					196					21,771			28	4,279	0	0	0	0	0	0	0	0	Cloudy, Sun	15°	
	02	Thu	127,226	19,806,635					185					21,956			28	4,307	0	0	0	0	0	0	0	0	Cloudy	12°	
	03	Fri	167,045	19,973,680					211					22,167			28	4,335	0	0	0	0	0	0	0	0	Cloudy, Sun	15°	
	04	Sat	228,749	20,202,429					274					22,441			28	4,363	0	0	0	0	0	0	0	0	Cloudy, Sun	15°	Trip Logs for #6 missing
	05	Sun	225,232	20,427,661					200					22,641			28	4,391	0	0	0	0	0	0	0	0	Sunny	16°	" " " " "
	06	Mon	166,484	20,594,145					197					22,838			28	4,419	0	0	0	0	0	0	0	0	Cloudy, Sun	16°	" " " " "
	07	Tue	177,526	20,771,671					221					23,059			28	4,447	0	0	0	0	0	0	0	0	Sunny	17°	" " " " "
	08	Wed	183,586	20955,257					287					23,346			28	4,475	0	0	0	0	0	0	0	0	Sunny	15°	" " " " "
	09	Thu	190,740	21,145,997					206					23,552			28	4,503	0	0	0	0	0	0	0	0	Sunny	19°	" " " " "
	10	Fri	237,190	21,385,187					240					23,792			28	4,531	0	0	0	0	0	0	0	0	Sunny	17°	Both Trip Logs Missing
	11	Sat	256,535	21,641,722					280					23,982			28	4,559	0	0	0	0	0	0	0	0	Sunny	16°	" " " " "
	12	Sun	341,806	21,983,528					260					24,242			28	4,587	0	0	0	0	0	0	0	0	Sunny	17°	" " " " "
	13	Mon	128,050	22,111,578					100					24,342			28	4,615	0	0	0	0	0	0	0	0	Sunny	14°	" " " " "
	14																												
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TOTALS			2,565,988	22,111,578	415	486	583	1388	2767	3,685	3,768	5,669	11,335	24,342	2,737	35,024	364	4,615	0	0	0	0	0	0	0	0			

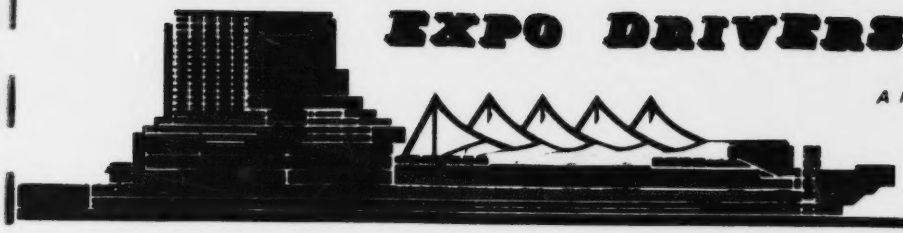
MONTHLY OPERATIONAL SUMMARY

	MAY	JUNE	JULY	AUGUST	SEPT	OCT
SERVICE PROVIDED						
KILOMETERS	6,916	6,196	6,433	6,430	6,312	2,737
SERVICE HOURS	840	840	868	863	840	364
TOTAL PASSENGERS						
Wheelchair Psgrs	438	613	644	741	834	415
Ambulatory Psgrs	367	592	686	780	857	416
Attendents	633	843	1,098	1,298	1,214	553
Senior Citizens	886	1,438	1,832	2,770	3,011	1,383
TOTAL PASSENGERS	2,324	3,486	4,260	5,589	5,916	2,767
RIDERSHIP DISTRIBUTION						
CATEGORY OF PSGR						
Wheelchair Psgrs	18.85%	17.58%	15.12%	13.26%	14.10%	15.00%
Ambulatory Psgrs	15.79	16.98	16.10	13.96	14.49	15.00
Attendents	27.24	24.18	25.77	23.22	20.52	20.00
Senior Citizens	38.12	41.25	43.00	49.56	50.89	50.00
HOUR OF THE DAY						
09:00 - 10:00	1.94%	1.98%	4.72%	5.32%	5.41%	5.50%
10:00 - 11:00	6.28	6.54	6.46	7.03	7.49	7.50
11:00 - 12:00	8.13	6.80	5.26	5.01	6.22	6.25
12:00 - 13:00	6.03	5.02	5.82	5.37	5.44	5.50
13:00 - 14:00	5.85	6.51	7.00	6.16	8.45	7.50
14:00 - 15:00	9.17	7.95	8.03	8.38	7.74	8.00
15:00 - 16:00	8.73	10.19	10.40	8.25	9.91	10.00
16:00 - 17:00	11.57	9.01	8.78	9.07	9.99	10.00
17:00 - 18:00	9.90	9.73	7.79	9.29	10.26	10.00
18:00 - 19:00	10.80	8.72	8.47	9.40	8.45	8.50
19:00 - 20:00	6.93	8.41	7.68	7.57	6.49	6.50
20:00 - 21:00	8.00	7.89	7.63	6.77	5.83	6.00
21:00 - 22:00	4.65	7.43	5.96	6.69	4.50	4.75
22:00 - 23:00	2.02	4.02	5.98	5.69	3.82	4.00
DAY OF THE WEEK						
Sunday	10.32%	10.15%	15.33%	12.70%	13.89%	14.67%
Monday	14.52	17.26	14.74	14.34	13.29	9.47
Tuesday	12.38	15.92	13.42	15.77	12.05	14.09
Wednesday	20.23	14.78	14.83	17.46	15.98	18.22
Thursday	18.08	12.61	11.60	14.04	14.06	12.47
Friday	14.79	16.12	14.87	13.43	15.54	14.38
Saturday	9.68	13.16	15.21	12.26	15.39	16.70
LOCATION OF PICKUP						
Canada Gate	70.10%	68.26%	63.85%	61.87%	53.94%	52.00%
West Gate	1.89	3.76	12.68	10.76	15.10	16.00
Stadium Gate	1.76	3.07	11.69	14.05	12.96	14.00
East Gate	26.25	24.91	11.78	13.32	18.00	18.00
VEHICLE DRIVER						
1. Pargat Bhandal	0.00%	7.92%	8.07%	18.64%	20.81%	19.70%
2. Amar Dosansh	18.72	27.71	26.06	30.11	24.95	22.84
3. Patrick Mabee	16.14	13.26	13.66	11.54	---	---
4. Chris McCreery	15.70	12.23	18.52	16.75	21.14	21.25
5. Ken Mondor	17.73	12.52	14.91	7.61	17.43	17.89
6. Ken Swayze	14.37	8.44	---	---	---	---
7. Murray Virtue	17.34	17.92	18.78	15.35	15.67	18.32
DRIVER PERFORMANCE						
PASSENGERS PER HOUR						
1. Pargat Bhandal	---	4.93	6.14	7.14	6.76	7.79
2. Amar Dosansh	3.11	5.24	6.00	7.65	8.29	9.03
3. Patrick Mabee	2.98	3.95	4.55	6.32	---	---
4. Chris McCreery	2.61	3.80	4.61	5.64	8.28	8.40
5. Ken Mondor	2.56	3.28	4.02	5.06	5.89	6.43
6. Ken Swayze	2.27	3.50	---	---	---	---
7. Murray Virtue	3.20	4.24	4.71	5.94	8.02	6.58
OVERALL PERFORMANCE						
ON-TIME PERFORMANCE						
Times Late 5-10min	196	365	36	12	7	0
Times Late 10-20min	220	104	23	30	6	0
Times Late 20-30min	146	12	0	3	0	0
Times Late >30min	303	76	0	10	0	0
Times Early 5-10min	299	73	17	30	9	0
Times Early 10-20min	287	51	33	20	7	0
Times Early 20-30min	194	38	13	9	0	0
Times Early >30min	497	90	5	8	0	0
KILOMETERS PER HOUR	8.23	7.38	7.41	7.45	7.51	7.52
PASSENGERS PER HOUR	2.77	4.15	4.91	6.48	7.04	7.60
COST PER PASSENGER	$7.22	$4.82	$4.07	$3.09	$2.84	$2.63

WEEKLY OPERATIONAL SUMMARY

WEEK	EXPO ATTENDANCE	SHUTTLE BUS RIDERSHIP								SERVICE PROVIDED				ON-TIME PERFORMANCE				WEATHER		REMARKS
		WEEKLY					CUMULATIVE				KILOMETERS		HOURS							
	WEEKLY	WHEELCHAIR	AMBULANT	ATTENDANT	OTHER	TOTAL	WHEELCHAIR	AMBULANT	ATTENDANT	OTHER	TOTAL	WEEKLY	CUMULATIVE	WEEKLY	CUMULATIVE	5-10 min	10-20 min	20-30 min	> 30 min	5-10 min	10-20 min	20-30 min	> 30 min		
01 May 02 - May 03	225,706	5	40	12	21	78	5	40	12	21	78	280	280	56	56	21	23	24	3	1	0	0	0	0.84	1,123.31
02 May 04 - May 10	704,925	61	73	85	61	340	66	83	117	82	422	2,827	1,754	252	308	42	30	49	89	53	74	51	117	1.73	1,111.93
03 May 11 - May 17	678,442	104	84	104	84	530	170	168	182	104	928	3,755	1,746	448	448	140	69	30	94	40	90	70	181	2.74	1,114.69
04 May 18 - May 24	842,717	195	69	187	139	675	365	537	369	243	1,445	5,197	1,442	644	644	33	9	11	8	10	53	48	163	3.94	1,115.63
05 May 25 - May 31	757,437	123	80	161	321	775	488	367	633	564	2,052	6,216	1,469	840	840	54	48	2	1	65	48	11	1	3.47	1,115.48
06 Jun 01 - Jun 07	736,643	136	87	175	760	678	574	479	888	996	3,602	6,913	1,503	868	868	43	44	4	6	24	2	4	8	3.46	1,115.18
07 Jun 08 - Jun 14	765,452	133	78	225	345	859	707	659	994	1,188	3,881	7,693	1,491	1,232	2,100	81	20	8	12	26	23	16	48	4.38	1,119.56
08 Jun 15 - Jun 21	835,388	136	31	163	345	715	843	781	1,178	693	4,496	11,222	1,339	1,428	3,528	71	17	0	28	14	10	9	29	3.95	1,115.46
09 Jun 22 - Jun 28	865,833	161	169	237	413	937	1,004	948	1,415	1,106	5,473	15,700	1,496	1,924	5,452	13	16	0	0	13	8	8	5	4.58	1,119.04
10 Jun 29 - Jul 05	881,048	103	176	177	360	766	1,107	1,124	1,592	1,466	6,239	18,939	1,498	1,924	7,376	34	9	0	0	4	6	7	0	3.91	1,115.12
11 Jul 06 - Jul 12	945,671	474	140	79	430	1,123	1,581	1,264	1,671	1,896	7,235	25,953	1,439	2,216	9,592	11	4	0	0	4	8	5	0	4.27	1,119.38
12 Jul 13 - Jul 19	961,816	114	69	268	447	1,305	2,886	2,332	3,939	3,362	8,740	34,693	1,460	2,252	11,844	3	8	0	0	3	12	0	0	4.48	1,119.33
13 Jul 20 - Jul 26	959,439	215	193	318	432	1,158	4,044	4,524	7,257	5,794	11,898	46,591	1,433	2,252	14,096	2	4	0	0	4	7	2	5	5.19	1,113.46
14 Jul 27 - Aug 02	911,329	166	166	206	446	1,084	5,128	4,690	7,463	6,240	13,982	60,573	1,467	2,252	16,373	1	4	0	0	2	1	0	0	5.24	1,113.46
15 Aug 03 - Aug 09	1,032,241	183	216	336	582	1,317	6,445	6,206	9,796	7,822	15,299	75,873	1,441	2,252	17,814	1	4	0	0	2	3	1	0	6.12	1,112.79
16 Aug 10 - Aug 16	1,017,847	172	98	317	440	1,027	7,472	6,304	9,976	8,262	16,326	92,199	1,443	2,252	19,257	3	10	2	9	8	2	3	1	6.12	1,112.79
17 Aug 17 - Aug 23	1,014,196	262	181	739	1,243	2,425	9,897	8,547	13,219	11,505	18,751	110,950	1,431	2,252	20,688	15	5	7	0	0	1	1	2	6.07	1,112.79
18 Aug 24 - Aug 30	982,185	159	140	238	411	1,143	11,322	9,687	13,445	11,916	20,894	131,701	1,436	2,252	22,124	1	1	4	0	0	7	4	0	6.07	1,112.79
19 Aug 31 - Sept 06	960,806	196	178	382	632	1,378	12,700	10,071	14,077	12,548	22,272	154,023	1,436	2,252	23,560	1	2	0	0	3	6	0	0	5.85	1,113.13
20 Sept 07 - Sept 13	778,300	171	185	278	457	1,093	13,793	10,956	14,534	13,005	23,365	177,388	1,436	2,252	24,996	4	0	0	0	0	0	0	0	7.03	1,112.84
21 Sept 14 - Sept 20	1,068,298	173	208	434	773	1,588	15,381	11,390	15,308	13,778	24,953	202,341	1,436	2,252	27,248	1	3	0	0	0	0	0	0	6.70	1,112.90
22 Sept 21 - Sept 27	1,087,494	286	151	384	679	1,500	16,881	11,774	15,692	14,457	26,453	228,794	1,436	2,252	29,500	1	1	0	0	4	1	0	0	7.35	1,112.72
23 Sept 28 - Oct 04	1,081,313					1,405	18,286	11,774	16,076	14,457	27,858	256,652	1,436	2,252	31,752	0	0	0	0	0	0	0	0	7.07	1,112.83
24 Oct 05 - Oct 11	1,139,233					1,641	19,691	11,774	16,076	14,457	29,263	285,915	1,436	2,252	33,188	0	0	0	0	0	0	0	0	7.17	1,112.79
25 Oct 12 - Oct 13	469,856					1,641	21,332	11,774	16,076	14,457	30,904	316,819	1,436	2,252	34,624	0	0	0	0	0	0	0	0	7.14	1,112.79
TOTALS	22,111,578																							6.19	1,113.11

APPENDIX B: DRIVERS NEWSLETTERS



EXPO DRIVERS' NEWSLETTER

A Newsletter for the Drivers of the Transport Canada Shuttle Bus Service for the Elderly and Disabled

JULY 11, 1986

THIS IS YOUR NEWSLETTER

The purpose of this newsletter is to share information with you, the drivers of the Transport Canada Shuttle Bus Service -- information about the service, information about upcoming events, information about your passengers, and any other items of interest that you would like to know more about.

Several of the drivers mentioned that they would like to know more the route that they drive. Hopefully, this newsletter will provide you with some facts about Gastown, Chinatown, the Steam Clock, and other items of interest to tourists. We will also try to keep you informed of upcoming events, places to shop, places to see, things to do, and other tidbits.

Please let us know if there is something we could provide you with information about. Just write a little note on the back of your log sheets.

RIDERSHIP TO DATE

Up to the end of June, you have carried 5,809 passengers -- 2,354 in May and 3,485 in June. The average now is 116 riders a day and the busiest day of the week is Monday. About 18 percent of the riders are in wheelchairs, 17 percent are ambulatory disabled persons, 40 percent are senior citizens and 25 percent are people accompanying these elderly and disabled persons as attendants or escorts. As you are probably well aware, almost 70 percent of the passengers board the bus at the Canadian Pavilion. We are hoping that more riders will eventually start boarding the buses at the other gates.

UPCOMING EVENTS

The specialized period of July 20 to July 25 is called **Communications and Mobility for Elderly and Disabled People.** On show will be the latest technology aimed at helping the disabled. This period recognizes the question of access for disabled people to urban transit systems and a whole range of existing transportation and communication services.

At that time, the Fourth International Conference on Mobility and Transport for Elderly and Disabled Persons will be held at the University of British Columbia. About 500 people from all over the world will be attending this conference and a large percentage of them will be disabled. Therefore, at that time, you can expect an increase in ridership with many of your patrons asking a lot of questions about the service. In forthcoming issues of this newsletter, more information about the conference will be provided.

FILLING IN YOUR LOG SHEETS

The ridership statistics are used to keep track of the number of persons using the service -- mainly by the category of passenger. These statistics will be extremely useful for planning other international expositions since this is the first Expo that has been so accessible for disabled individuals.

Identifying and categorizing riders is difficult. Based on the experience to date, it is believed that it would be easiest if categories are defined that the majority of the drivers appear to be using already. Therefore, could all drivers use the following definitions when reporting the number of passengers on their log sheets:

Wheelchair - number of passengers boarding the bus at a stop that are in a wheelchair.

Ambulant - number of passengers that are disabled (hearing or sight impaired, difficulty walking, difficulty reaching or grabbing, etc.) but are able to walk onto the bus.

Attendant - number of passengers that are <u>not</u> disabled and appear to be accompanying or travelling with a disabled or elderly person.

Other - number of **senior citizens** or elderly persons that do not appear to have any visible disability but are probably 65 years of age or older.

And you should just write down the number of passengers that board the bus at each stop (not the number that you are carrying when you stop).

With respect to reporting of the **time** that you leave the stop, you only have to write down the time that you actually leave the stop if it is 5 minutes or more from the scheduled time. The purpose is to see if the schedule is appropriate and there is enough time on the route.

THE SHUTTLE BUS SERVICE

The Canada Pavillion is located about 1.2 kilometers from the main Expo 86 site. It's within the federal government's Canada Place complex which also houses the new Pan Pacific Hotel, a World Trade Centre, the World Business Showcase, and a cruise ship terminal -- all of which would have been impossible to locate on the Expo 86 site.

Transportation between the Canada Pavilion and the Expo site is provided by a SkyTrain shuttle service. To do so, it was necessary to divide the station platforms at each location in order to separate fare-paying SkyTrain passengers from Expo visitors. Unfortunately, both sides of the divided platforms were not fully accessible by the disabled. Therefore, with the regular SkyTrain service remaining accessible, the shuttle service provided by the rapid transit system is not accessible to the disabled passenger.

Recognizing the need for accessible inter-site transportation, Transport Canada organized funding and equipment to provide the shuttle bus service for the disabled. The service operates on a 30-minute headway between each of the four gates of Expo for the duration of the fair using vans donated and modified by Get-Away Enterprises of Richmond.

The Shuttle Bus Service is provided by Transport Canada as a means of ensuring that the Canadian Pavilion is accessible and barrier-free and of allowing elderly and disabled Expo visitors to travel conveniently between the various gates of Expo 86.

The vans normally accommodate up to three wheelchair passengers and seven other passengers, but can be converted to other passenger configurations. In addition to the comfortable interiors and ramp loading system, the vans are among the first to incorporate stricter safety construction features in the roof -- setting new standards of safety.

The vans use a ramp loading system rather than a lift because it was felt that lifts are not reliable enough to meet the heavy demands that will occur during the fair.

In forthcoming issues, we hope to provide you with a detailed status report of the RMS electronic tracking system that is supposed to enable passengers to track the progress of each van on video displays at each gate.

A SHOPPING BONANZA

If your Expo visitors happen to ask about places to shop, here's a guide to shopping in and around our fair city (from the Province newspaper).

For fun shopping -- including sightseeing, eating, and atmosphere -- the following three public markets are recommended.

● **Lonsdale Quay Public Market,** foot of Lonsdale, North Vancouver. This opened most recently and has been an instant success. One of the nicest things about this market is getting to it.

Take the SeaBus, which crosses Burrard Inlet to the foot of the market. The SeaBus is a 400-passenger catamaran. It leaves every 15 minutes and the 20-minute trip is delightful. It provides a different perspective of the city, a great view of the sails at Canada Place, and a closeup of cruise ships berthed there.

The revolving letter Q marks the Quay, a three-level attraction.

On the first level is the market itself, full of stalls and shops selling everything from produce to cheese, from popcorn to pasta, and from bakery goods to kitchenware to fast food which you can eat out on the plaza.

Take the glass elevator or stairs to the market's second level where you'll find trendy boutiques of all kinds, a medium-priced restaurant (The Cheshire Cheese Inn) and a Waterfront Bistro (open to those 19 and older) serving drinks and light meals from noon to 2:00 am.

On the third level is the Lonsdale Quay Hotel, Tugs Pub (for those 19 and over and open from 11:00 am to 1:00 am) and Loops Restaurant, overlooking the harbour with an extensive menu and some outside tables.

Lonsdale Quay Market is open from 9:00 am to 7:00 pm Monday through Wednesday, from 9:00 am to 9:00 pm Thursday and Friday and from 9:00 to 6:00 pm on Saturday and Sunday.

● **Granville Island Public Market.** This also takes advantage of Vancouver's seaside atmosphere and has been a big favourite ever since its opening in 1979.

As at Lonsdale Quay, the groceries are fresh, the fast food is delicious and it's a great people-watching place. Along with restaurants and theatres and galleries, there's a Marine Market to delight any boater and a Kid's Only Market to fascinate the kids.

Unlike the Quay, Granville Island's market has lots of other interesting shops around it.

Granville Island also features a number of restaurants, an adventure playground for the kids, and the Arts Club Theatre.

Parking is often impossible, so take a bus -- No. 50 or 51. Or you can get the Granville Island Express, a private shuttle, in Robson Square.

Market hours are 9:00 am to 7:00 pm Monday through Friday, and on Saturday, Sunday and public holidays 9:00 am to 6:00 pm.

● **Robson Public Market,** 1610 Robson Street. It you're staying downtown, you may even be able to walk to this market which opened last winter. On the first level are stalls and shops selling groceries and other delectables. The second level is a fast-food fair where you can sit and watch shoppers below.

It's open from 9:00 am to 9:00 pm seven days a week.

Here are a few of the major shopping centres:

● **Pacific Centre,** at Georgia and Granville Street, is the city's largest shopping centre. It has Eaton's department store at one end, The Bay at the other, and a two-level mall in between with more than 100 stores.

There's convenient underground parking below the mall.

Centre hours are: Monday, Tuesday and Wednesday 9:30 am to 6:00 pm; Thursday and Friday 9:30 am to 9:00 pm; Saturday 9:30 to 5:30 and Sunday 10:00 am to 5:00 pm.

● **Oakridge Centre,** at Cambie and 41st, has free parking and Woodward's department store as well as dozens of shops throughout its malls. It has recently been completed renovated and rejuvenated and many of the finer stores are located there. Hours are Monday, Tuesday, Wednesday and Saturday, 9:30 am to 6:00 pm; Thursday and Friday 9:30 am to 9:00 pm and Sunday 11:00 am to 5:00 pm.

● **Park Royal,** in West Vancouver, is just west of the north end of the Lions Gate Bridge. It was once known as Canada's largest shopping centre and is located on both sides of Marine Drive. It has Woodward's, Eaton's and The Bay, as well as more than 100 other shops. Parking is ample, convenient and free.

Hours are somewhat of a jumble: The centre is open 9:30 am to 6:00 pm on Monday, Tuesday and Wednesday; 9:30 am to 9:00 pm on Thursday and Friday, 9:30 to 5:30 on Saturday, and 12 noon to 5:00 pm on Sunday. But the three department stores don't open until 10:00 am.

● **Lansdowne Park Shopping Centre,** 5300 No. 3 Road, Richmond, has Eaton's and Woodward's department stores, plus lots of other shops.

Hours are Monday, Tuesday and Saturday 9:30 am to 5:30 pm; Wednesday, Thursday and Friday 9:30 am to 9:30 pm and Sunday, 11:00 am to 5:00 pm.

Aside from shopping centres and public markets, Vancouver has other areas for shopping that have become favorites. Among these are:

● **Chinatown** is found on Pender Street for two blocks east and west of Main Street. It's full of Chinese restaurants, grocery stores and shops where you'll find the ingredients for Chinese cooking and other shops selling Chinese clothing, knick-knacks and other items. Its the largest Chinatown in North America outside of San Francisco.

● **Gastown** -- the oldest area of the city -- is near Chinatown. Featuring shops and restaurants, its heart is Water Street from Richards to Main.

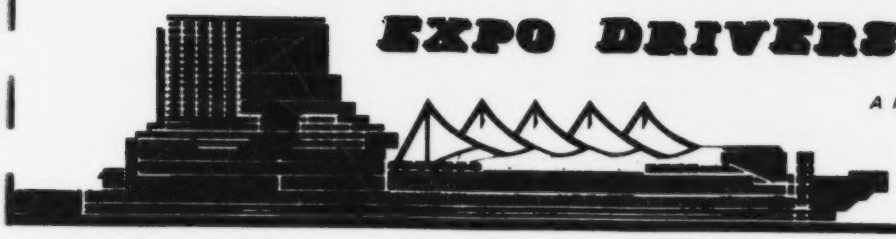
● **Robonstrasse** (Robson from Burrard to Broughton) is bustling day or night during good weather. It's lined with restaurants and clothing boutiques, including the new **Robson Fashion Park,** where you'll find Ralph Lauren/Polo, Laurel, and Alfred Sung.

● **South Granville,** from Seventh to 16th Avenues, offers antique shops as well as clothing stores and cafes.

● **Kerrisdale,** in the heart of the city's affluent Kerrisdale and Shaughnessy areas, has lots of nice, little shops on West 41st between Maple and Larch.

● **Fourth Avenue,** between Burrard and Alma, caters to the largely singles area of Kitsilano.

In the next issue there will be a list of places to see.



EXPO DRIVERS' NEWSLETTER

A Newsletter for the Drivers of the Transport Canada Shuttle Bus Service for the Elderly and Disabled

JULY 18, 1986

WHAT'S HAPPENING

As mentioned in the first newsletter, the purpose of this newsletter is to share information with you, the drivers of the Transport Canada Shuttle Bus Service.

A meeting was held on July 15th between the various parties that are involved in the provision of the service. It was mentioned at the meeting that there have been no complaints as yet about the service and every passenger that has been interviewed to date is very enthusiastic about the service.

Much of the discussion at the meeting centered around the small problems with the vehicles, such as the need for a small tool kit and a small cleaning kit, as well as the various items in need of repair. Most of these appear to have solutions that will occur in very short order.

Rest assured that you are being listened to and attempts are being made to resolve the small problems that crop up.

Don't forget to let us know if there is something we could provide you with information about. Just write a little note on the back of your log sheets.

RIDERSHIP TO DATE

Up to July 10th, you have carried 6,907 passengers -- 2,354 in May and 3,485 in June and 1,098 so far in July. The average in July so far is 110 riders a day. The busiest time of the day appears to be between 3:00 and 6:00 o'clock in the afternoon.

UPCOMING EVENTS

Communications and Mobility for Elderly and Disabled People (Expo July 20 to 25). On show will be the latest technology aimed at helping the disabled. This period recognizes the question of access for disabled people to urban transit systems and a whole range of existing transportation and communication services.

Fourth International Conference on Mobility and Transport for Elderly and Disabled Persons (July 20 to 23) will be held at the University of British Columbia. About 300 people from all over the world will be attending this conference and 35 of them are confined to wheelchairs and another five have other disabilities.

Disabled Sports Program (Expo, July 20 to 25) takes place in the Kodak Pacific Bowl all week.

Canada Pavilion (Expo, July 20) Ships of The World Parade; **(July 25 to 27)** Grand Fiddle Off. Phone 666-2234 for more information.

Vancouver Sea Festival (July 20 to 31) Annual Sea Festival with Parade, beach, music and sports events takes place all week at English Bay.

Vancouver Sea Festival Air Show (July 23,25,27) Wednesday and Friday at 6:45 p.m., Sunday at 1:00 p.m. Best locations to view the show are Sunset Beach, English Bay, Vanier Park and the Burrard Street Bridge.

World Championship Bathtub Race (July 20) from Nanaimo Harbor on Vancouver Island to Kitsilano Beach in Vancouver. Phone 753-1191 for more information.

Vancouver Folk Music Festival (Jericho Beach Park, July 18 to 20) main stage concerts each evening, six daytime stages Saturday and Sunday, crafts, food, little folks musical festival and over 200 performers from around the world. Phone 879-2931 for more information.

Flea Market and Carnival (Bonsor Recreation Center, July 24) fun for the whole family. 6637 Fern Avenue. 433-8311.

Flower Show (VanDusen Gardens, July 26,27) annual fuchsia and begonia show, plant sale, door prizes and refreshments. Located at 37th Street and Oak Street in Vancouver.

OUT-OF-TOWN EVENTS

Billy Barker Days (Quesnel, July 17 to 20) over 130 events and attractions for fun and frolic in the 1860s Gold Rush tradition. Phone 992-8716.

Tinman Triathlon (Cultus Lake, July 19) Chilliwack. 688-3677.

July Fest (Penticton, July 16 to 20) parades, dances and sports. 861-8484.

Kelowna International Regatta (City Park, July 24 to 27) cross-lake swim, drag boat races and belly flop contest. 763-1651.

All Sooke Logger Sports (Sooke, July 19) championship logging events include sawing, tree climbing, log birling. Sooke on Vancouver Island. Phone 474-2183.

Sandcastle Contest (Parksville, July 20) beer garden, kids sandcastle competition and concessions. At Parksville on Vancouver Island. 248-3613.

GASTOWN

Gastown is the site of Vancouver's first community dating back to the 1860s. It was built around the Globe Saloon, owned and operated by a former river pilot. Captain John Deighton, affectionately known to all as 'Gassy Jack' because he just never stopped talking. 'Gassy Jack' Deighton became one of the city's founding fathers, opening his saloon in 1867 and today his memory lives on through this unique part of Vancouver, which bears his name in part.

After the great fire in 1886, which all but levelled the fledging city of Vancouver, Gastown gradually fell into disrepute, becoming a ramshackle, run-down, skid row. In the late 1960s, a group of farsighted businessmen began to restore and renovate Gastown, and the result is what you see today -- a heritage site, with red bricked streets, clusters of decorative lamplights, smart boutiques, art galleries, jazz clubs, and restaurants. It was declared a heritage site in 1971 by the City of Vancouver.

Some of the skid row characters, pushed farther east by the restoration of Gastown, occasionally wander back 'home'. They, along with the street musicians and sidewalk craftspeople, add to the flavour of the area.

Most people think of the Gastown of today as being the three blocks of Water Street starting at Cordova Street and ending at Maple Tree Square, where Water, Carrall, Powell and Alexander Streets converge.

Maple Street Square is overlooked by a large statue erected in 1970 of 'Gassy Jack' Deighton himself. The square is named after an enormous maple tree that originally grew on the spot. Unfortunately, that particular tree has long since gone, but a replacement has been planted, along with several others along either side of Water Street.

The Mews on the south side of Water Street is an interesting arcade built around the old, original passageways with names like Blood Alley and Gaoler's Mews that tell you some of the history of the place.

At the corner of Cambie Street is the much-photographed **Gastown Steam Clock**, the first of its kind in the world. Framed in antique bronze, with a glass windowcase that allows the viewer to watch the steam engine and clock movements in operation, the Westminster Chimes sound each quarter hour, with the big production number on the hour every hour.

WHAT TO SEE IN VANCOUVER

If your Expo visitors happen to ask about places to see, here's a guide to must see attractions in Vancouver.

● **Stanley Park.** The 1000-acre Stanley Park opened in 1889 and is one of the best in North America. Stop at the towering red cedar totem poles, and at Prospect Point, which stands above the spot where the SS Beaver met her end in 1888 (the Beaver was the first steamship on the Pacific Northwest).

Try not to miss the Vancouver Aquarium in Stanley Park. There are more than 8,000 marine and fresh-water animals in four exhibit areas ranging from the cold, sparkling waters of the Pacific Northwest to tropical oceans and the heart of the Amazon jungle.

● **Chinatown,** second biggest in North America after San Francisco. Part of the enjoyment in visiting Chinatown is to be found by wandering through many of these stores, browsing through rows of lacquered inlaid boxes, ivory chopsticks, perfumed fans, exquisite jade carvings, sweet-smelling incense, exotic kites and lanterns, bamboo pipes, paper flowers, rattan baskets, and much, much more.

Behind the Chinese Cultural Centre on Pender Street is the **Dr. Sun Yat-Sen Park and Garden,** completed in 1986, and a perfect replica of a classical Chinese Garden. It is designed after the 15th-century garden city of Suzhou and is the first complete garden of the Ming Dynasty to be built inside or outside China since 1492. The tranquil garden features bridges, terraces, pavilions and rockeries with a profusion of bamboo and bonsai trees bordering a pond.

● **Gastown,** where Vancouver began when 'Gassy Jack' Deighton stepped ashore with a barrel of whiskey and built a saloon. Gastown was declared a heritage site in 1971 and contains many interesting boutiques and restaurants.

● **Queen Elizabeth Park,** on Cambie Street, for panoramic views of the city, is the highest point within the city limits. Many wedding parties come here to have their photographs taken amid the beautiful gardens. It houses the Bolédel Conservatory, a tirodetic dome filled with tropical plants.

● **Van Dusen Botanical Gardens,** at 37th and Oak, has Vancouver's widest collection of trees, shrubs, annuals and perennials, lichens, mosses, and primitive trees, each labelled and positioned in its family relationships. In the 56 acres, there's an artificial lake, oriental gardens, and a special area for plants and trees from around the world.

There are daily tours on Tuesday, Wednesday and Thursday afternoons -- particularly for disabled individuals.

● **English Bay's** lovely beaches, and over the Burrard Street Bridge to Kitsilano Beach and along exclusive Point Grey Road to the shimmering sands of Spanish Banks. This is a good spot to take photographs of the city and mountain skyline, often with a freighter riding at anchor in the foreground.

● **University of British Columbia,** where you can see the Museum of Anthropology (admission is free on Tuesdays and just $2.50 on other days), the Nitobe Memorial Japanese Garden (a fine example of Japanese landscaping) and the Rose Garden.

At the Museum of Anthropology, besides the dozens of totem poles, there are galleries containing artifacts from the Pacific Northwest, the bowls, baskets, button-blankets of the Northwest Indians.

● **Vanier Park and the Planetarium.** Take a ride over Burrard Bridge to Vanier Park and see the H.R. Macmillan Planetarium, the Vancouver Museum, and the Maritime Museum, home of the St. Roch, the first vessel to go both ways through the Northwest Passage.

● **Granville Island Market** is fun for strolling and shopping, rain or shine. The 37 acres of Granville Island were dredged up on the tidal flats of False Creek in 1913. Industry dominated the area for 60 years, but by the early 1970s plans were made for redevelopment. The market opened for business in the summer of 1979 and is the Island's largest commercial retail establishment.

● **Royal Hudson Steam Train** provides a six hour ride from the North Vancouver depot at the foot of Pemberton Avenue, along the spectacular mountainside of Howe Sound to Squamish. It leaves at 10:30 in the morning and returns at 4:00 in the afternoon, with a stop-over in Squamish for lunch. The cost is $14 for adults with special rates for seniors, students and children.

● **Vancouver Art Gallery.** If its wet, visit the Vancouver Art Gallery in Robson Square with its unrivalled collection of Emily Carrs as well as a children's gallery.

● **Capilano Area.** Over the Lions Gate Bridge to the North Shore -- one can do the Capilano Salmon hatcheries, Capilano Suspension Bridge, Cleveland Dam, the sprawling homes of the British Properties and the tram ride up Grouse Mountain for fabulous views and strolls.

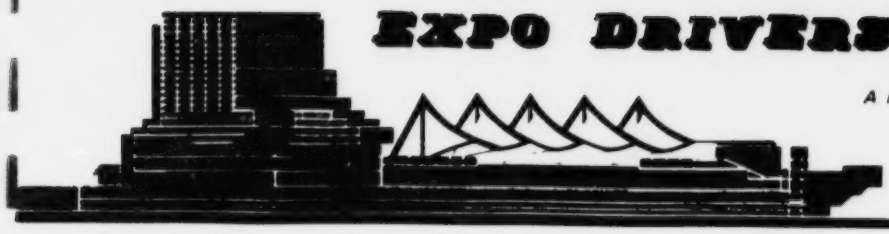
The Capilano Suspension Bridge soars 230 feet above the river, stretching 450 feet across Capilano Canyon. The bridge is Vancouver's oldest attraction. Since 1898 more than two million visitors have crossed the breathtaking gorge.

● **Cypress Provincial Park,** off the Upper Levels Highway, provides you with a spectacular panoramic view from the east to the west of Indian Arm, the Second Narrows Bridge, the Burrard Inlet, Stanley Park, Lions Gate Bridge, University of British Columbia, and even the Gulf Islands away in the distance. Picnic tables make this a super spot for a meal outdoors.

● **Heritage Village in Burnaby** consists of some 30 different shops, offices and display areas of the 1890-1925 era contained in a variety of newer and original buildings. The blacksmith's shop, apothecary, and ice cream parlour are all open for business, and a friendly staff in costumes of the era act as guides around the bank, printing shop, general store, school house, and other fascinating establishments from a bygone age.

In addition to the nostalgia, there is a Miniature Train Ride that wanders through the outskirts of the restored village, chugging and tooting as it pulls little flatcar-loads of people twice around the circuit.

● **Fantasy Garden World in Richmond** is a gardener's delight. Other features include aviaries that shelter exotic birds, a wedding chapel for a memorable occasion, a carillon, and a conservatory with a fine display of plants. The Fantasy Garden World is currently being expanded to include rides and other family entertainment.



EXPO DRIVERS' NEWSLETTER

A Newsletter for the Drivers of the Transport Canada Shuttle Bus Service for the Elderly and Disabled

JULY 25, 1986

DON'T FORGET

When counting passengers for the log sheets, a passenger sitting in a wheelchair should be counted as such -- even if they transfer from the wheelchair, fold up their wheelchair and sit in another seat.

We know some of you have been trying to keep track of which stops the passengers get on and where they get off. We really appreciate the effort, but our main concern is just to record the number of passengers **getting on** the vehicle at each stop.

RIDERSHIP TO DATE

As of July 17th you have carried 7,781 passengers -- quite a number of satisfied customers.

UPCOMING EVENTS

Canada Pavilion (Expo, July 25 to 27) Grand Fiddle Off. Phone 666-2234 for more information.

Vancouver Sea Festival Air Show (July 25,27) Wednesday and Friday at 6:45 p.m., Sunday at 1:00 p.m. Best locations to view the show are Sunset Beach, English Bay, Vanier Park and the Burrard Street Bridge.

Flower Show (VanDusen Gardens, July 26,27) annual fuchsia and begonia show, plant sale, door prizes and refreshments. Located at 37th Street and Oak Street in Vancouver.

Vancouver Stamp Bourse (Sheraton-Landmark Hotel, July 27) offers a wide selection of philatelic items as well as collectable postcard materials from the late 19th century to present time. 1400 Robson Street. 263-0029.

Vancouver Chamber Music Festival (St. Georges School, July 29 to Aug 4) fifteen musicians from across Canada and the United States. 8:30 p.m. with preconcert recital at 7:30 p.m. 4175 West 29th Avenue. 280-3311

OUT-OF-TOWN EVENTS

Kelowna International Regatta (City Park, July 24 to 27) cross-lake swim, drag boat races and belly flop contest. Phone 763-1651 for more information.

Penticton Peach Festival (Penticton, July 27 to August 3) premier event of the year featuring outdoor craft fair, watersports and the Grand Parade. 492-4103.

North Fraser Tugboat Parade (July 27) decorated work boats and ships. Phone 688-3677.

Loggers Days (Squamish, July 31 to August 4) great competitions, great times. 688-3677.

PLACES TO SEE ON AND NEAR YOUR SHUTTLE BUS ROUTE

At your stop at the Canada Gate, you can of course see the Canadian Pavilion and Canada Place. After Expo, this part of the complex will become the **Vancouver Trade and Convention Centre**, the second-largest convention centre in Canada. Other features of Canada Place include the **World Trade Centre** where several companies have set up displays of their services and products; the **Cruise Ship Terminal**, with complete facilities to accommodate several ships at the same time; and the elegant 15-storyed **Pan Pacific Hotel**, with more than 500 luxuious guest rooms an suites, where Prince Charles and Princess Diana stayed when they were in town.

When you leave the stop at the Canada Pavillion and drive up Howe Street, at the corner of Howe and Dunsmuir, the **Arts, Sciences and Technology Centre**, is one block to your left at 600 Granville Street (687-8414), containing three floors of changing exhibits in a 'hands-on' museum that has particular appeal to the young and the young at heart, and it is also a spot well worth remembering for one of those rainy days when you are looking for 'indoor things' to do. Admission is $3.00 for adults and $1.50 for children, students and seniors.

Next on your immediate left is the two-level **Pacific Centre**, one of Canada's largest indoor and underground shopping malls and, therefore, ideally suited to Vancouver's sometimes inclement weather. The upper level tends to be devoted to stylish clothing and jewelry stores. The lower level contains miscellaneous book, record and other stores. The Centre is connected underground to both **The Bay** and **Eaton's**, two of Canada's larger department store chains. The Bay was established in Canada 300 years ago as the fur trading Hudson's Bay Company.

As you drive another block up Howe Street, you can see **Robson Square** on your right. The first building that you see is the old Law Courts Building and now the home of the **Vancouver Art Gallery.** Telephone 682-5621 for details on current exhibitions. The permanent collection includes paintings by members of the Group of Seven and Emily Carr, perhaps Canada's most famous artist, plus works by European and American artists. The Gallery has a particularly good gift shop with a substantial offering of art books, prints, and postcards. Admission is free on Tuesdays, and regular rates are $2.50 for adults, $1.00 for seniors and students, and free admission for children under 12. Note that the Gallery is closed on Mondays except for statutaory holidays.

Next on the right, on a lower level in the middle of Robson Square, is the **Robson Square Media Centre**, where lectures, exhibitions, cultural displays, films, and musical performances are held. Also in this area are restaurants, fast food outlets, and even a skating rink. During the summer months a variety of outdoor concerts are held in the rink area, making it a popular place for downtown office workers to eat lunch while listening to a string quartet or watching a dance troupe. Next to the rink is a large office of **Tourism British Columbia** (668-2300) with a helpful staff to answer questions and supply maps and brochures for attractions throughout the province.

The next building on the right is the new **Law Courts Building**, the magnificent creation of Vancouver architect Arthur Erickson and completed in 1980.

MILES OF SEA AND SAND

If your Expo visitors happen to ask about places to swim and tan, here's a guide to beaches in Vancouver (from the Province newspaper).

Vancouver has it all: miles of sandy beaches minutes from the downtown core, variety enough to spice up any summer and satisfy every taste.

● **Wreck Beach** was chosen by TV's 'Lifestyles of the Rich and Famous' as one of the world's top 10 beaches.

Those who make it down the trails from UBC, along the crumbling Point Grey foreshore, find an unspoiled beauty that beats anything near any major city, anywhere.

It's primarily a nudist beach, six kilometres long from the Musqueam Indian Reserve to Point Grey.

East around Point Grey are the 22 kilometres of beaches that are the responsibility of the Vancouver Parks and Recreation Board.

● **Spanish Banks, Locarno and Jericho Beaches** occupy a stretch of sand five kilometres long. At one end, Greek and Portuguese immigrants cast nets for smelt. In the middle, young couples with kids are grouped around picnic tables. The east end of Locarno is the most popular board-sailing area in the city. Jericho, the second-largest park in Vancouver, is ideal for nature walks and family picnics. Families fish for crab from the pier.

There's plenty of parking; there is wheelchair acessibility; there are concession stands and lifeguards.

● **Kitsilano Beach**, the next stop is the most popular beach. The heated saltwater pool opens at 7:00 a.m. for fitness freaks and closes at 9:00 p.m. It takes 12 laps to swim a mile.

There's also 'The Scene'. In the morning, they pump iron. In the evening, they make the rounds. During the day, it's Kits and a sea of suntanned flesh. The area around the building that resembles an aircraft tower is for the young and strong at heart.

● **Sunset Beach** is Vancouver's newest beach, just north of the Burrard Street Bridge. At Sunset, you can also see every boat imaginable move through the narrow channel into False Creek.

Along with Spanish Banks West and Locarno, Sunset is a quiet beach -- no amplified music. And no swimming right now because of pollution.

● **English Bay** is the 'grand old dame' of Vancouver beaches. It's still the place to watch a parade of people, at the edge of the heart of the city.

● **Second Beach**, along the Stanley Park seawall, has a large salt-water pool, unheated but filtered, and playing fields and playgrounds that attract large numbers of families.

● **Third Beach**, tucked away in the northwest corner of Stanley Park is large stretch of sand that is popular with young adults, with a spectacular ocean view. Like all beaches along the seawall, there are lifeguards, food concessions, picnic facilities, change rooms and wheelchair accessibility.

Over along Marine Drive in West Vancouver, there are a handful of neighbourhood beaches, undiscovered by most Lower Mainland residents.

● **Whytecliff Park**, out by Horseshoe Bay, has swings, grassy fields and Whyte Island for the kids to walk to and climb. It is also popular with scuba divers. Take the Horseshoe Bay exit off the Upper Levels Highway, bear left and you find the landscaped parking lot.

● **Eagle Harbour**, a small beach east of Horseshoe Bay, is the pride of its neighbourhood but swimming is temporarily out there.

● **Lighthouse Park**, at the foot of Beacon Lane, is not a beach but there are rocks for sunbathing and the walk from the parking lot is right out of a Supernatural B.C. poster.

Take your pick from Jackpine Point or Starboat Cove or a tour of the Point Atkinson lighthouse, 11 a.m. to 5 p.m., Wednesday through Sunday.

● **Sandy Cove** is in the 3900 block Marine Drive. By walking down the stairs and through a small gulley, you suddenly encouter the ultimate getaway, a small quiet beach that faces Point Grey.

● **Dundarave**, at the foot of 25th is the ultimate West Van beach. There are flowerpots on the pier, sensible logs in neat rows and just enough parking to make certain it stays in the family. It is also wheelchair accessible.

You can take a ferry between Expo's Marine Plaza and the Dundarave pier, 9 a.m. to 10 p.m.

● **John Lawson Park**, at the foot of 17th Avenue, is a great spot for preschoolers, with its playground and sandy beach. There's no lifeguard, but there are washrooms.

● **Ambleside Beach** is the only beach on the Lower Mainland that allows fires. On the right is the surfing and sailing crowd; on the left, hard-core tanners; in the middle, the middle; and on the grass, the singles scene.

Ambleside has become even more popular at night since the Guiness family lit up Lions Gate Bridge.

● **Panorama Beach**, in North Vancouver, is seven km from the Deep Cove exit on the Second Narrows Bridge. It features a diving platform, government wharf and canoe and kayak rental.

● **Cates Park** is 5 km along Dollarton Highway from Second Narrows. The Picnic facilities in the spacious park can be reserved by contacting the North Vancouver District Park Board.

● **Crescent Beach**, in Surrey, is a longtime favourite of people who want to spend a day in a sleepy summer village. The community of summer cottages is a 45-minute drive from the city centre, south on Highway 99.

● **White Rock**, which is further south, is a resort community. It has 5 km of tidal flats and the water is as clean and safe as anywhere in this area. Marine Drive has been rejuvenated from the pier to the rock, creating a promenade with picnic tables along the beach and in parks.

● **Barnet Marine Park**, the pride of Burnaby, was ten years in the making. The beach offers a new view of Burrard Inlet. It's adjacent to the Texaco property on Barnet Highway.

EXPO DRIVERS' NEWSLETTER

A Newsletter for the Drivers of the Transport Canada Shuttle Bus Service for the Elderly and Disabled

AUGUST 1, 1986

THANK YOU!

Everybody seems to be doing a fine job filling in the log sheets -- so this is just a note to say thanks. Your fine work makes our job a lot easier.

A QUICK GLIMPSE

Spotted last week on the front of a bus pulling up to the main gate at Expo and letting off several dozen senior citizens: the route indicator said "Recycled Teenagers".

RIDERSHIP TO DATE

As of July 24th you have carried 8,956 passengers. The week of July 20th looks like it was an especially busy week, but all the figures are not in yet -- suffice to say that you probably carried more people in five days that you usually do all week.

UPCOMING EVENTS

British Columbia Day (August 4) Expo celebrates B.C. Day with a large variety of entertainers and special features. The action starts August 3rd with the B.C. Celebration Showcase, at 8:30 p.m. at the Plaza of Nations, featuring Paul Horn, Shari Ulrich, Tom Lavin, Bim, Jim Byrnes and others.

Official August 4th celebrations begin at 9:45 a.m. with the arrival of the Fur Brigade at waterfront plaza near the B.C. Pavilion.

Opening ceremonies start at 11:00 a.m. at the Plaza of Nations featuring a giant birthday cake shaped like a map of B.C. Continuous entertainment with varied acts runs from 1:00-10:00 p.m. at the Plaza of Nations.

At 8:00 p.m. Expo Theatre hosts a gala starring David Foster, Anne Mortifee, Tommy Chong, Lori Fung, Corey Cerovsek, Fairuza Balk and others (tickets are $12.50 at VTC).

And there will be a special fireworks at 10:30 p.m. followed by a costume carnival dance at the Plaza of Nations.

Flight Into History (Expo, August 4 and 7) On these two dates, a flypast will be conducted over the Expo site of transportation aircraft of many types and origins, beginning with the newest and most advanced types of air trans-ports, and followed by the older turbo props and piston-engine craft.

OUT-OF-TOWN EVENTS

Penticton Peach Festival (Penticton, July 27 to August 3) premiere event of the year in this area of the province featuring outdoor craft fair, watersports and the Grand Parade. 492-4103.

Loggers Days (Squamish, July 31 to August 4) competititors from Australia, New Zealand and United States in the logging championships on Sunday afternoon, great times. 688-3677.

Lighter-than-Air Demonstration and Display (Boundary Bay Airport, July 31 to Aug 3) These large craft will sail over Vancouver on July 31 and then be moored at Boundary Bay Airport where they will be displayed and demonstrated.

Surrey Community Fair and Rodeo (Cloverdale Rodeo, August 1 to 4) The Surrey County Fair and Rodeo takes place with a Midway, agriculture exhibit, and a rodeo.

Air Fair 86 (Abbotsford Airport, August 4 to 7), For four days, aviation exhibitors and guests will take part in an exhibition of the latest in international aviation technology at the Abbotsford Airport.

Abbotsford International Airshow (Abbotsford Airport, August 8 to 10) Provides an unparalleled spectacle of flying events including civil and military aerobatic teams. This famous show will celebrate its 25th anniversary with a truly spectacular air show.

A SURVEY OF EXPO VISITORS

A recent survey of about 1000 expo visitors showed that most people like the fair (from the Province). One in five visitors gave the fair a perfect "10". The results of the survey are presented on the back of this newsletter for your interest.

The ages of the respondents were:

-18	11.8%
19-25	13.7%
26-35	24.0%
36-45	18.4%
46-55	12.4%
56-65	11.3%
65+	8.4%

The origins of the visitors are interesting; they are:

Greater Vancouver	45.4%
Other parts of B.C..	11.9%
Other parts of Canada	14.8%
United States	26.4%
Other	1.5%

THE UNIQUE SEABUS SYSTEM

The Burrard Inlet Seabus System is the only one of its kind in the world. It is designed to meet the transportation requirments of commuters while adhering to the principles of expandable rapid tansit.

And it is attracting interest from all over the world -- from Turkey for crossing the Bosphorus, from Hong Kong with its islands and from the Staten Island Ferry System in New York to name a few.

The system is based upon the use of two rapid passenger ferries that are fed by an extensive bus service funelling down from all parts of the North Shore and connecting with a similar service in Vancouver. Speed, convenience and ease of transfer are the primary considerations.

When choosing a design for the boats, the planners took all these criteria into consideration. The twin-hulled Seabus is extremely stable, light and therefore faster than most conventional ferries. Its rectangular shape allowed for the construction of a docking platform that facilitates even loading.

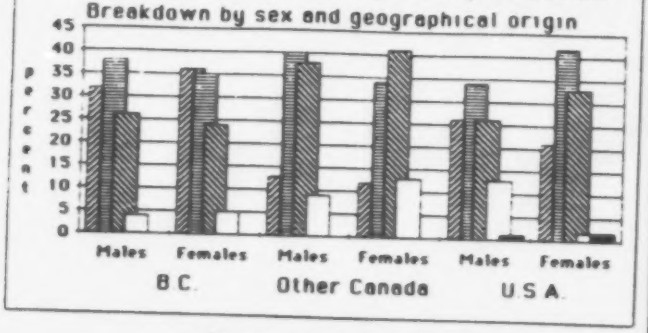
There are six doors on each side of the boat. When the ferry is completely docked and locked into place by two hydraulic arms, the ramps are lowered and the doors are opened manually by a crew member. Once most of the 400 passengers have disembarked, the doors on the opposite side are opened to allow loading. The entire transfer takes place in 90 seconds. Almost three times as many people are using the SeaBus this year (thanks to Expo and the SkyTrain).

An innovative propulsion system gives the ferries amazing manoeuverability. Instead of a fixed propellor and shaft, they are equipped with four right angle drives that allow an easy full-circle turn. In a trial emergency stop, it was shown that the boat could come to a relatively smooth full stop in about 50 feet, which is just over its over-all length of 42 feet.

Each ferry carries a crew of four - a captain, a mate and two attendants. The mates are all certified captains. The bridge is equipped with radio and radar.

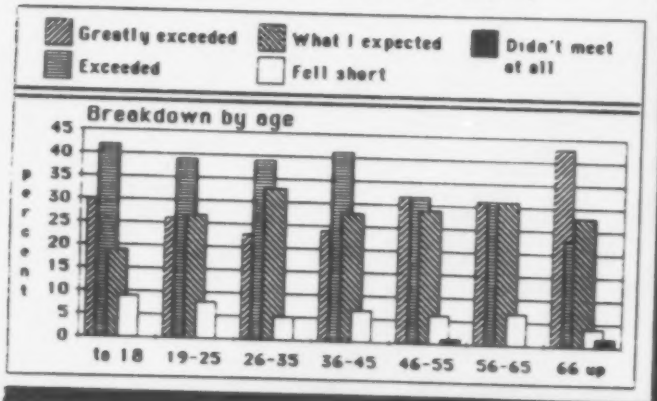
The low interior noise, the seating area almost completely surrounded by windows, the interesting view of the harbour and the feeling of gliding rather than bumping over the water, makes for a relaxing and enjoyable harbour crossing.

How well did Expo meet your expectations?

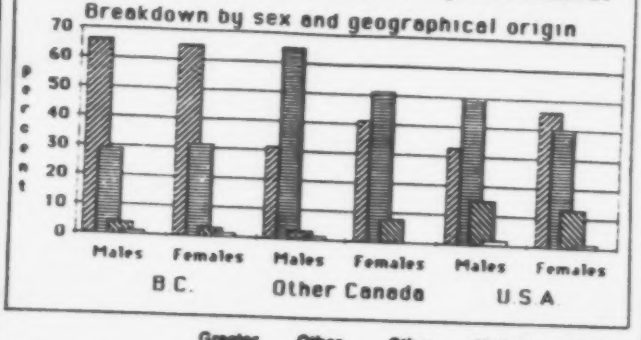


	Greater Vancouver	Other B.C.	Other Canada	United States	TOTAL
"greatly exceeded"	35%	29%	13%	23%	27.9%
"exceeded"	36%	39%	37%	38%	36.8%
"what I expected"	25%	25%	39%	30%	28.5%
"fell short"	4%	6%	11%	8%	6.4%
"didn't meet at all"	0%	1%	0%	1%	0.4%

('TOTAL' figures include visitors from outside Canada and the U.S.)

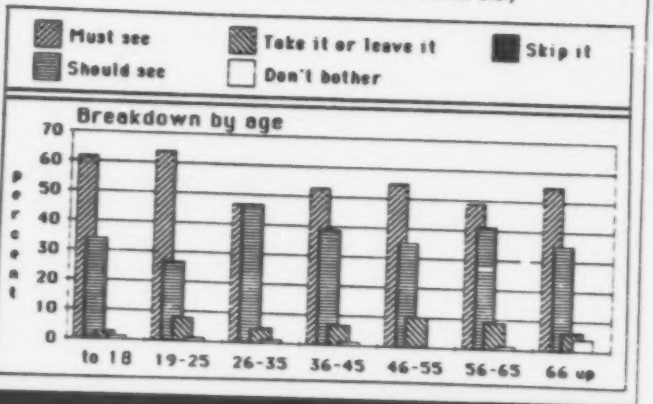


How would you recommend Expo to others?



	Greater Vancouver	Other B.C.	Other Canada	United States	TOTAL
"must see"	65%	67%	36%	39%	54.0%
"should see"	30%	29%	57%	46%	38.1%
"take it or leave it"	4%	2%	6%	14%	6.6%
"don't bother"	1%	2%	1%	1%	1.2%
"definitely skip it"	(0.2%)	0%	0%	0%	0.1%

('TOTAL' figures include visitors from outside Canada and the U.S.)



EXPO DRIVERS' NEWSLETTER

A Newsletter for the Drivers of the Transport Canada Shuttle Bus Service for the Elderly and Disabled

AUGUST 8, 1986

RIDERSHIP TO DATE

As of July 31st you have served 10,070 passengers -- 4,260 of which were served in July. Fifteen percent of the passengers in July were in wheelchairs, 16 percent were ambulatory disabled persons, 26 percent were attendants and 43 percent were senior citizens.

Saturday and Sunday are the busiest days of the week, but Monday, Wednesday and Friday are close behind. The busiest one-hour period is from 3:00 pm to 4:00 pm but any one-hour period between 1:00 pm and 9:00 pm is a close second.

If you took mainly day shifts in July, you probably carried fewer passengers than the guys who take the evening shift. Pargat had 344 riders in July, Amar had 1110, Patrick 582, Chris 789, Ken 635 and Murray 800.

By far the most passengers board the shuttle at Canada Gate -- 64 percent in July. The other gates are about equally divided -- 13% at the West Gate, 12% at both the Stadium Gate and the East Gate.

UPCOMING EVENTS

Cruise Ship Terminal Open House (Canada Pavilion, August 8) The open house of the Vancouver Port Corporation Cruise Ship Terminal will feature North America's newest cruise ship facility in the heart of the city. Tours of the Costa Cruise Line ship Daphne will be offered every ten minutes from 12:00 noon to 2:00 p.m. There will be exhibitis and audio-visual presentations by various cruise lines and travel agencies. Preticketing is necessary for the tours (see your local newspaper).

Vancouver International Puppet Fest (University of British Columbia, August 8 to 9) famous puppeteers from around the world.

Singapore Day (Expo Site, August 9) Singapore celebrates its national day with three varied acts. Featured will be the Singapore Airlines Band, Chinese opera stars Joanna Wong Quee Heng and Lou Mee Wah, and a 12-man lion dance troupe. All groups will be featured at national day ceremonies (10:30 a.m.) and at 5:30 p.m. concerts at Asian Plaza from August 8-10. Lion dancers also perform at 1:00, 2:30 and 3:30 p.m. at Xerox Interna-tional Theatre on August 9 and 10. Opera Singers will perform August 11-13 at 6 p.m. at the pavilion.

Horticultural Show (Richmond Ice Arena, August 9,10) flowers, fruit, vegetables, hanging baskets and floral art. 7551 Minoru Gate. Phone 271-8327 for more information.

Dance in Canada (Queen Elizabeth Playhouse, August 12 to 14) Jumpstart, Paula Ross Company, EDAM, O Vertigo danse, Toronto Dance Theatre. 689-1986.

Pakistan Day (Expo Site, August 14) A 22-member cultural troupe performs folk dances during opening ceremonies at Plaza of Nations and other sites to be confirmed.

Ballet Gala (Queen Elizabeth Theatre, August 14 to 16) National Ballet of Canada, Royal Winnipeg Ballet, Les Grands Ballets Canadiens. New works by Helgi Tomasson, Brian Macdonald, James Kudelka. 689-1986.

NASA Space Shuttle Art Collection (Planetarium, thru August) acrylics, watercolours and oils; Secrets of the Sun; Dire Straits Now! 1100 Chestnut Street. 738-2855.

Bubblomania (Arts, Science & Technology Centre, August 11 to 17) An effervescent extravaganza featuring the art and science of soap bubbles. Current exhibitions: Waterworks; Flowmotion. 600 Granville Street. 687-8414.

OUT-OF-TOWN EVENTS

Prince George Fall Fair (Prince George, August 7 to 10) annual fall exhibition. Phone 847-5227 for more information.

Abbotsford International Airshow (Abbotsford Airport, August 8 to 10) Provides an unparalleled spectacle of flying events including civil and military aerobatic teams. This famous show will celebrate its 25th anniversary with a truly spectacular air show.

Canadian National Parachuting Championships (Princeton, August 9 to August 17) Sport parachutists from all across Canada will compete in accuracy, style, and relative work events for National titles and the right to represent Canada at the World Championships in Turkey in Sept. 1986.

Eastside Children's Festival (Bellevue Community College, August 10) entertainment, stage performances, hands-on art projects, international film festival, pony rides, petting zoo, food booths. 11:00 am to 7:00 pm. Bellevue, Washington. (206) 455-5686.

WHAT'S A SCAT?

You have probably seen a small electric vehicle carrying wheelchairs between the Canadian Pavilion and the Seabus terminal. If you have, you've seen SCAT!

SCAT is an electric modular vehicle consisting of a single platform on casters. Its low platform is easily accessible, and side barriers convert into wheelchair ramps. The seats can be folded up to make room for wheelchairs and luggage. Operated by a single attendant, SCAT is easy to maneuver, even in tight spaces -- the vehicle can make a complete turn in about 2.5 metres.

SCAT comes in indoor and outdoor models. The one that you have seen is the outdoor SCAT 02. Fitted with a protective canopy, the outdoor SCAT 02 can carry seven passengers at speeds up to 16 kilometres per hour. It is powered by four electric batteries, which are charged up each night. After charging, the vehicle can operate all day. Presently, it is providing a shuttle service between the Canadian Pavilion and the Seabus and Skytrain terminal.

SCAT was designed to assist elderly and disabled travellers who have difficulty traversing the long distances in airports and other transportation terminals. With these travellers in mind and the support of the Transportation Development Centre, the research arm of Transport Canada, Rutenberg Design Inc. of Dorval, Quebec, designed and built SCAT: Small Carrier for Alternative Transportation.

The Transportation Development Centre (TDC) of Transport Canada is responsible for developing and evaluating innovative technology and concepts to improve the safety and efficiency of the national transportation system. An important component of the Centre's R&D program is its research into safe and accessible transportation for elderly, disabled and other mobility disadvantaged Canadians.

TAKE A DIFFERENT VIEW!

If your Expo visitors think that the view from Expo's space tower is fantastic, tell them have you got a view for them!

It's from the top of **Grouse Mountain** and well worth leaving an Expo pass behind for a day. But remind your guests to bring their camera.

On the top of Grouse, you feel like you are on top of the world. During the day, you can see all of the city beneath you, the curve of the horizon and even Mount Baker and Vancouver Island on a clear day. At night the city is a million twinkling lights.

Grouse is a great place to take a picnic and enjoy some nature walks. Or you can eat, sitting out at umbrella tables on the decks at several restaurants and bars.

Or you might catch a helicopter at the top of Grouse for a ride over the mountains.

The attraction of the mountain dates all the way back to 1894. In that year, a party of hikers ventured up its slopes and, upon shooting a Blue Grouse, decided to name it 'Grouse Mountain'.

By the 1920's, when motor touring became a favourite passtime, a W.C. Shelley foresaw the attraction of the mountain's wilderness setting and panoramic view. By 1924, he completed a paved toll road (Mountain Highway) to the top of Grouse and the original log chalet.

The late 40s and mid-60s brought about major changes at Grouse Mountain with the installation of North America's first double chairlift in 1949 and then, in 1965, the completion of Canada's largest tramway (known as the Blue Skyride). Both additions provided easier public access to the mountaintop.

By 1975, Grouse was becoming a famous Vancouver landmark. The following year, 1976, construction began on the Superskyride. Not only was the Superskyride to become known as Canada's largest and most modern tramway, but also for the thrilling ride itself, which whisks you to an elevation of 3,700 feet (1,100 metres) in a mere 4 minutes.

You can get to Grouse Mountain by car or by bus and then by taking the skyride on which you can ooh and ahh at the scenery below.

By car, take the Lions Gate Bridge, turning right off the bridge to North Vancouver. Then take your first left at the lights and drive Capilano Road to the top. By bus, take bus number 247 on Georgia Street in front of The Bay and then transfer to 232 further up .Capilano Road. It takes you right to the top.

Here you catch the skyride, from 9:00 am to 10:00 pm. Rates are $7.50 for adults, $5 for seniors, $4 for children six to 12, free for tots five and under and $18 for a family.

If you have reservations at the Grouse Nest Restaurant for dinner, your skyride is free. Entrees there range from $13 to $20.

During the fall, winter and spring, Grouse is a ski mecca. But in summer it's a meadow and forest, with added attractions such as an outdoor barbecue and beer garden, nature trails, and pony rides. There's also an adventure playground for children that the kids really seem to enjoy.

If you really want to be carried away, consider a helicopter tour. The cheapest is $20 per person for a ride over the Grouse mountains. A little further over to the Lions costs $40. And over to Expo as well costs $50.

Back on the ground and two miles down the mountain is another attraction, if you don't mind heights and walking on an undulating footpath.

It's the **Capilano Canyon Suspension Bridge**, a wire rope affair slung 230 feet above the river and 450 feet across it. The bridge is Vancouver's oldest attraction, dating from 1898.

The original span was a hemp and wood bridge constructed by Scotsman George Grant Mackay ("the Laird of Capilano") with the help of natives August Jack Khaht-sah-la-no and his brother Willie. The men used a team of horses to drag the heavy cables across the canyon. The cables were then secured to tree trunks and pulled taut. In those days, the bridge was dubbed "the Laughing Bridge".

The natural beauty of the canyon and the river proved to be such a popular site for excursions that W.T. Farrell purchased the grounds and built a more secure bridge in 1905. It was of heavy wire construction, anchored at either end in concrete.

Today's bridge was built on the same site in 1956. It is constructed of multi-strand pre-stressed wire rope cables, 1800 sq. feet of wood decking and 6 tons of concrete anchor.

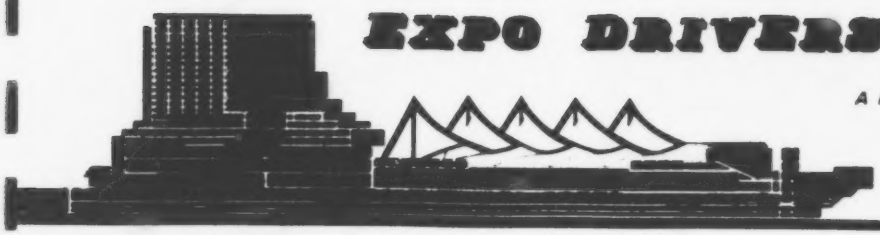
The bridge is in the Capilano River Regional Park and there is nice forest walks to enjoy throughout the Park.

Admission to the suspension bridge is free for children under six, $1 for children six to 12, $2.50 for students with idendification, $3 for seniors and $3.75 for other adults. The bridge is open from 8:00 a.m. to 9:30 p.m.

Further up Capilano Road, just after the suspension bridge is the **Capilano Salmon Hatchery**. The Salmon Hatchery, established in 1977 by the federal and provincial goyernment, was the province's first 'fish farm' and has been highly successful in increasing salmon production. The salmon begin their annual return runs in July, and depending on the species, the run continues until November. The greatest numbers return in September and October.

Fish in various stages of development can be seen, as well as working models and diagrams showing the life cycle of the salmon. It is a fascinating, easy-to-understand exhibit in a superb natural setting. And it's all free! Telephone 987-1411 for further information.

Greater Vancouver's water comes from the man-made Capilano Lake created by **The Cleveland Dam**, built in 1954. The Lake provides the Region of Vancouver with some of the freshest and best-tasting drinking water in the world. The Dam is located just up from the Salmon Hatchery and is a spectacular site. From the dam, you can get one of the best views of the twin-peaked Lion mountains. It's a good place for a picnic with tables and large grass areas. It's also free. The entrance to the Cleveland Dam site is also from Capilano Road.



EXPO DRIVERS' NEWSLETTER

A Newsletter for the Drivers of the Transport Canada Shuttle Bus Service for the Elderly and Disabled

AUGUST 15, 1986

RIDERSHIP TO DATE

As of August 7th you have carried 11,270 passengers -- a growing list of satisfied customers.

August 18-24 Specialized Period: TRANSPORTATION FOR RECREATION

This is a natural for B.C. as recreation is a key part of the economy and virtually a way of life.

The period will have a dual emphasis: on recreational vehicles, ranging from hang gliders and yachts to snowmobiles, and on recreational travel including airlines, cruise ships, and so forth.

A major exhibition mounted by the Recreational Vehicle Association of Canada and co-sponsored by Crown Life Insurance Company, will include off-road vehicles, showshoes, skis, racing and rally cars, bicycles, mountain climbing equipment, bus conversions, tour buses, canoes, kayaks and yachts, computerized reservation systems and radio equipment.

A seminar on the impact of tourism on transportation systems is being organized by Expo 86.

Gift of Wings (June 30-Aug 25) A two-month cross Canada ultra-flight by Carl Hiebert to highlight the achievements of paraplegics and raise funds for the Canadian Paraplegic Association.

The 1986 Jeep Cup (Aug 18-24) The arrival of a rally that started from the east coast and will end at the Expo site, taking approximately 15 days. This will be the longest 4 Wheel Drive rally ever staged. All teams drive identical Jeep vehicles.

Recreational Craft and Equipment Display (Aug 18-24) At the Kodak Pacific Bowl, all forms of recreational craft from Hang-Gliders to Aqua-Cats, all-terrain motor bikes to off-road four-wheel drive rally cars, to skateboards will be displayed and demonstrated.

TransWorld Pro-Am Skateboard Championships (Aug 18-27) This will be the first truly "World Championship" skateboard competition, which will involve teams from many of the countries at Expo.

Women's World Sailing Competition (Aug 19-29) At Enlish Bay, this competition will be held as part of a summer long series of high level international and national sailing competitions.

UPCOMING EVENTS

Ballet Gala (Queen Elizabeth Theatre, August 14 to 16) National Ballet of Canada, Royal Winnipeg Ballet, Les Grands Ballets Canadiens. New works by Helgi Tomasson, Brian Macdonald, James Kudelka. 689-1986.

PNE Parade (Hastings and Burrard Streets, August 16) Annual Parade to start off the PNE Flashback Party with bands, floats, clowns and more.

Highway 86 Event (Highway 86, August 16) Jean Pierre Perrault. Expo Site. Phone 689-1986 for more information.

Indonesia Day (Expo, August 20) Indonesia hosts a Gamelan Festival, sophistica-ted percussion of Javanese gongs and drums, August 18 and 20 (8:00 p.m.). Kecak dancers from village of Geges will perform August 15 and 17. All shows are at the Xerox International Theatre.

The highlight of August 20 will be a Wayang shadow-puppet play 11:00 p.m. at the pavilion, slated to run seven hours.

Barbecue Bash (Confederation Centre, August 22) A barbecue bash for seniors 55 and up. 4585 Albert Street. Phone 294-1936 for more information.

Canadian Chili Championship (Westin Bayshore Hotel, August 23) activites begin in the morning and lead up to afternoon coork-off. Phone 684-5131 for information.

Conference of the Human Factors Association of Canada (Airport Inn, Richmond, August 22-23) human factors on the move conference dealing with the presentation of research papers as well as workshops related to ergonomics. Contact Ms. Wallersteiner, 986-0603.

Lunchtime Concerts (at the Bentall Center, August 20, 27) summer entertainment for your noon hour enjoyment from 12:00 to 1:30 pm.

OUT-OF-TOWN EVENTS

4th Annual Festival of the Written Arts (Sechelt, August 15 to 17) writers include W.O. Mitchell, Edna Alford, John Edwards, Helen Chestnut. 885-3930 for more information.

Coombs Fall Fair (Coombs, August 16 to 17) home cooking, arts and crafts and produce at Coombs on Vancouver Island. 382-3551.

World Croquet Championship (Parksville, August 21 to 24) world croquet championships at Island Hall Hotel in Parksville. 382-2551.

PNE '86 FLASHBACK PARTY!

The 72nd Annual PNE Fair, running August 16 through September 1 at Exhibition Park, celebrates Vancouver's 100th birthday its colourful history.

The major theme exhibit a spectacular 360-degree mixed-media extravaganza -- "Centennial" -- playing daily in the Forum Building, is an entertaining presentation featuring highlights, events, important characters and historic landmarks of Vancouver. It combines the best features of film, theatre and theme-park technologies, expecially in animatronics.

Flashback Party highlights include a look at more than 40 rides on the Playland Midway -- from the giant wooden rollercoaster to the tamer ferris wheel or sky glider.

Food concessions abound, offering cotton candy, corn dogs, soft drinks, ice cream and a variety of selected ethnic foods. There's also the Garden Courtyard for a relaxing beverage.

The 1986 Agriculture Show promises to be one of the best shows in recent years. The show highlights include the return of key dairy and beef cattle sales and other competitions including horses, sheep, dairy goats, poultry, swine, and rabbits.

In the 7,500-seat Action Bowl, 200 drivers from the Lower Mainland and Washington State will compete in the Demolition Derby Thrill Show for cash, trophies and merchandise worth more than $25,000.

Two new events highlight the Timber Show with the inclusion of ladies' axe-throwing and bow-saw competitions.

During the Fair, thoroughbreds run at The Track Mondays, Wednesdays and Fridays at 6:15 p.m. On Saturdays, Sundays and Labour Day, post time is 12:45 p.m.

Special Youth Days are Mondays, August 18 and 25 when kids 12 and under are admitted free.

On Family Fun Day, Sunday, August 17, admission to the Park is free for everyone until noon.

Free admission is provided by the PNE to all senior citizens on the three Seniors' Days -- August 20, 26 and 27. A special highlight on August 26 and 27 is the Seniors' Festival in the Garden Auditorium. With the theme "The Good Old Summertime", the festival presents an opening ceremony, sing-alongs, picnic races, a fiddlers' jamboree and displays and community centre programs. A dance will be held each afternoon at 2 p.m. with Mart Kenney and his Orchestra.

THE VIDEOBUS SYSTEM

The VIDEOBUS system installed by RMS Industrial Controls at the various shuttle bus stops on your route was originally developed for the City of Nice in southern France.

Designed by a Nice firm (Societe SEREL-France), this system, which was developed with the cooperation of the Societe des Transports Urbains de Nice (the transit authority in Nice), fulfills the requirement:

- improvement of passenger comfort at stops, by reducing as much as possible the tedium of waiting at stops, caused mainly by uncertainty. This is the function of the VIDEOBUS system, which provides passengers with continuously updated information at bus stops. It shows the position of the vehicles that will arrive on each of the routes which call at the stop where the equipment is installed.

To fulfil this requirement, the system must perform the following functions:

- detect buses and identify the routes on which they are operating;
- transmit these data to the information points (at the bus stop);
- display the data at these points in a clear manner, adapted to passenger needs.

The equipment fitted to the vehicles comprises:

- a microwave transceiver in a sealed case, fitted inside the vehicle at a height of 2.50 meters above the ground.
- an encased logic microprocessor at the front of which are rotary switches for preselecting the vehicle identification number.
- an encased preselector for the bus route number (using coding wheels) which is mounted on the facia and connected to the previous piece of equipment.

The roadside equipment consists of support-mounted beacons at much the same height as the transceivers in the buses. They consist of sealed cases containing:

- a microwave transceiver;
- a microprocessor logic unit for receiving bus messages and transmitting beacon messages;
- the rotary switches for preselecting their identification number.

These beacons are sited near the stops along the routes.

The equipment mounted on the vehicles is linked to the detector beacons by microwaves, which ensure better directivity and greater transmission reliability than conventional radio waves.

The beacons transmit an 'interrogation message' continuously and cyclically. When buses enter the transmission area they receive and identify these messages, and then transmit their own 'vehicle message'.

The vehicle message consists of the vehicle identification and route number.

The detector beacons are linked to the bus stops by telephone cable so as to shield the transmission from the phenomena of screening and interference which affect urban radio links.

Since each beacon can receive and transmit data for several routes, a telephone pair is necessary for each route and travelling direction.

If the vehicle message is correct, the beacon identifies the route on which the vehicle is travelling, in order to select the telephone pair allocated to that route.

The vehicle message is then converted into a beacon message by replacing the route code by the beacon code; the choice of the telephone pair enables the vehicle route to be identified.

If several vehicles are detected simultaneously, each beacon memorises its message until the transmission is free.

VIDEOBUS boards installed at each stop on supports give passengers a picture of the routes stopping there.

The number and name of the routes concerned appear at the front. These are given by means of a diagram showing the names of the stops upstream. Indicator lamps representing the detection points are placed between each stopping place.

For reasons of size and legibility, the capacity of the boards is limited to three routes with about 10 indicator lamps each.

Reception of the 'beacon messages' causes the indicator lamp for the relevant detection point to light up on all boards downstream from the transmitting beacon. This lamp continues to glow until the next beacon has detected a bus on the same route. If for some reason (damage, shielding) the next beacon is unserviceable, the indicator lamp is extinguished by the next serviceable beacon encountered.

In this way, passengers can follow the progress of the vehicle they are waiting for. The passenger information is supplemented by details of the average waiting period, i.e. the average travelling time between the stop at which the vehicle has been detected and the stop at which the passenger is waiting.

The first experiment with the VIDEOBUS system commenced in the City of Nice in May 1981. For this purpose, 13 information boards and 18 detector beacons were installed over a distance of about 3.5 km along a route between the city center and the Nice airport.

In view of the success of this operation, the City of Nice decided to extend the VIDEOBUS system throughout the city.

Hopefully, in future editions of this newsletter, we will be able to give you a better account of the operation of the current system.

EXPO DRIVERS' NEWSLETTER

A Newsletter for the Drivers of the Transport Canada Shuttle Bus Service for the Elderly and Disabled

AUGUST 22, 1986

ANOTHER NOTE

Some of you have been noting when dogs have been taken as passengers on your vehicle. It would be very helpful if you could also note if the dog is either a seeing eye dog or a dog for the hearing-impaired.

I assume that other dogs that are just pets are not allowed on the vehicle just as they are not allowed on the Expo Site.

RIDERSHIP TO DATE

As of August 14th you have carried 12,659 passengers -- quite a number of satisfied customers.

August 25-31 Specialized Period: HUMAN POWERED TRANSPORTATION

Human-powered vehicles are among the most appealing and offbeat contemporary innovations.

They are a challenge to the technology of aerodynamics, propulsion, power transmission and energy storage, and perhaps an answer to the problems of pollution, fuel conservation, and the human need for exercise.

This period will emphasize increases of speed in human-powered vehicles, with a prize being offered by the Dupont Corporation for the first human-powered vehicle to reach a speed of more than 65 m.p.h. There will also be speed record competitions for haman-powered vehicles on both land and sea.

In addition, the International Human Powered Vehicle Association will hold its 1986 convention in Vancouver, and there will be a scientifically oriented international symposium on human power, during the specialized Period.

12th Annual International Human Powered Championships (Aug 25-31) Will be held at various sites within the Greater Vancouver area.

Third International Human Powered Vehicle Scientific Symposium (Aug 27-28) The objective of this symposium is to explore the scientific aspects of the development of human powered vehicles (land, water or air).

1986 World Championship of BMX Freestyle (Aug 28-30) Kodak Pacific Bowl. Sanctioned by the International BMX Federation, this is the first ever World Championship of Freestyle to be staged.

UPCOMING EVENTS

Manifold Destiny (Strathcona Park, August 21 to September 6) Caravan Stage Company, the world's only horse-drawn, open-air theatre. Five painted, handcrafted wagons are drawn by matched Clydesdale draft horses.

Romania National Day (Expo Site, August 22) Romania's National Day at the Expo Site.

Barbecue Bash (Confederation Centre, August 22) A barbecue bash for seniors 55 and up. 4585 Albert Street. Phone 294-1936 for more information.

Big Band Dance (Hyatt Regency Hotel, August 22) The Association for the Preservation of Swing and Big Band Music presents Ron Rutherford and his 17-piece Preservation of Swing Band in the Regency Ballroom. Phone 732-1922 for more information.

Canadian Expo of Gems (South Delta Recreation Centre, August 22 to 24) demonstrations include lapidary, silversmithing, carving, faceting, chain making and enameling of metals. 1720 56th Street, Tsawassen, B.C.

The Journey to Peace (B.C. Place Stadium, August 23) celebrate inner peace and share that peace with the world. 9:00 am to 6:00 pm.

Canadian Chili Championship (Westin Bayshore Hotel, August 23) activities begin in the morning and lead up to afternoon coork-off. 684-5131.

La Scala Opera Company (Pacific Closeum, August 24 to September 1) only appearance this year in North America of I Lombardi, Verdi's requiem, with a cast of 20 soloists, a 116-member chorus, 118 musicians and 55 others. Ticket prices range from $19 to $75. 689-1986.

Organization of Eastern Caribbean States Day (Expo Site, August 26) The OECS brings a week-long calypso celebration to Expo. Calypso bands and dancers will perform at the pavilion stage from August 23-28.

The main day-long celebration is August 26 at Xerox International Theatre. Performing are Cultural Dancers-Swinging Stars Calypso Band (Dominica), Burning Flames Calypson Band (Antigua), Paul Keens Douglas-Tamarine Dance Company Big Drum Dancers (Grenada), Calypsonians Aroow and Hero supported by Dominica Calypso Band (Montserrat). Coronets Steel Orchestra (St. Kitts, Nevis), Boo Hinkson Musical Trio (St. Lucia), X.A. Dus Calypso Band L.O.B. Corporation, Naked Roots Drummers, Calypsonia Scorcher Dancers (St. Vincent).

Grand Kabuki of Japan (Queen Elizabeth Playhouse, August 26 to 30) traditional Japanese theatre with a celebration of Yokohama Day observed on August 28.

Barbados Day (Expo Site August 29) Popular singers The Merrymen and Ruk-A-Tuk percussion band perform at Xerox International Theatre.

OUT-OF-TOWN EVENTS

World Croquet Championship (Parksville, August 21 to 24) world croquet championships at Island Hall Hotel in Parksville. 382-2551.

Labour Day Invitational Tournament (Grand Forks, August 27 to Sept 1) softball tournament. 365-8486.

EXPO SERVICES FOR VISITORS WITH SPECIAL NEEDS

The Expo 86 Site has been planned for the enjoyment and safety of all visitors. Stairs are marked with tactile warning strips, handrails are extended and stair treads are coloured to be easily seen by visually imparied guests.

Any area of the site which is publicly accessible can be reached by wheelchair. This includes all Expo-operated pavilions, gates, restaurants, shops, cabarets and theatres.

Most rides and on-site transportation systems are designed to accommodate patrons with disabilities. All plazas can be entered by wheelchair. Entrances, restrooms and drinking fountains are also designed for wheelchair accessibility.

Theatres are equipped with entrance ramps and spaces for wheelchairs. Restaurant tables are of suitable height for wheelchair patrons.

Canada Pavilion. All areas of the Canada Pavilion are wheelchair accessible, including its theatres and restaurant areas. Special vehicles (the SCAT, mentioned in last week's newsletter) are availabe to transport mobility-impaired guests from the SkyTrain Waterfron Station to the Canada Gate adjacent to the Canada Pavilion.

For guests with visual impairments, elevators are equipped with tactile call buttons and audible up-down indivators. Elevator lobbies have textured floors. Other featrues include guardrails, handrail texturing, and tactile warining strips on stairs. In addition, there is a special travel line for the visually impaired.

EXPO DRIVERS' NEWSLETTER

A Newsletter for the Drivers of the Transport Canada Shuttle Bus Service for the Elderly and Disabled

AUGUST 29, 1986

JUST A REMINDER

Identifying and categorizing riders is difficult. All drivers seem to be using the following definitions when reporting the number of passengers on their log sheets but please check to make sure:

Wheelchair - number of passengers boarding the bus at a stop that are in a wheelchair.

Ambulant - number of passengers that are disabled (hearing or sight impaired, difficulty walking, difficulty reaching or grabbing, etc.) but are able to walk onto the bus.

Attendant - number of passengers that are not disabled and appear to be accompanying or travelling with a disabled or elderly person.

Other - number of **senior citizens** or elderly persons that do not appear to have any visible disability but are probably 65 years of age or older.

And you should just write down the number of passengers that board the bus at each stop (not the number that you are carrying when you stop).

RIDERSHIP TO DATE

As of August 21st you have carried 13,948 passengers -- an average of 125 passengers a day for the 112 days that you have been operating to this point. In May, the average was 77 passengers a day; in June, 116; in July, 137; and so far in August, 185.

UPCOMING EVENTS

1986 World Championships of BMX Freestyle (Expo Site, August 28-30) Kodak Pacific Bowl. Sanctioned by the International BMX Federation, this is the first ever World Championship of Freestyle to be staged.

Barbados National Day (Expo Site, August 29) Caribbean Rhythm calypso ban, Ruk-A-Tuk percussion band and Yuruba Dancers at Xerox International Theatre, 5-7 p.m.

Air Canada Day (Expo Site, Sept 1) The airline's 50th anniversary theme, Sentimental Journey, sees Mart Kenney and his orchestra with big band, swing and music of that era in the Plaza of Nations, 10:00 a.m. to noon, with public dancing and a costume contest.

Conference on Managing Transportation and Communications Projects (Robson Square, Sept 2 to 5) This 3-day conference in the Robson Square Media Centre is organized by the West Coast BC Chapter of the Project Management Institute.

Coho Festival (West Vancouver, Sept 3 to 7) One of the unique features of this year's event will be a group of Indian war canoes from around the province racing from the site of their ancestral home at Kitsilano Beach to the mouth of the Capilano River.

Salmon barbecues, mountain bike rallies, live entertainment, and a 14-kilometer fun run are all included in the event sponsored by the West Vancouver Chamber of Commerce.

For more information on the Coho Festival, contact festival co-ordinator Peter Burns at 926-5669.

United Nations Day (Expo Site, Sept 6) The date is yet to be confirmed, but UN Day will be between September 6 and 12.

OUT-OF-TOWN EVENTS

Labour Day Invitational Tournament (Grand Forks, August 27 to Sept 1) softball tournament. 365-8486.

Hot Air Ballon Rally/Balloonfest 86 (Langley, August 29 to September 2) This colourful rally of hot air balloons will take place in the Fraser Valley of British Columbia, near Vancouver.

Golden Rodeo Days (Golden, August 29 to Sept 1) Rodeo at Golden with midway and games for the family.

Fall Fair (Bella Coola, August 30 to 31) whole valley gets together for a weekend of fun and activities. Phone 392-2226 for more info.

Sailing Regatta (Gray Creek, August 30 to September 1) set your sails for sights of some exciting craft. 365-8486.

Collectables Auction (Barkerville, August 30) wine and cheese, 1940s costumes, great 1940s music. Phone 994-3295.

Canadian International Ultra Triathlon (Penticton, August 31) international competition in 2.4-mile swim, 112-mile bicycle race and 26.2-mile marathon run. 861-8494

Greenwood Fish Derby (Greenwood, August 31 - Sept 2) Fish Derby at Greenwood in the Kootenays.

Salmon Festival (Port Alberni, September 1) barbecue, loggers' sports, beer garden, bands, bullhead fishing derby for kids, fireworks. At the Clutesi Haven Marina, Port Alberni.

EXPO ATTENDANCE

Before Expo started, the projected attendance was 13.75-million. This figure was past last week.

After the May 2 opening, fair officials projected 15 million pre-sold visits and Expo Chairman Jim Pattison was speculating about having to close the gates when daily attendance topped 200,000. The optimism was premature -- and Expo still awaits its first 200,000 day.

In the heady days after the opening, Pattison raised his sights to 20 million -- matching last year's Tsukuba, Japan World's Fair.

Those totals are well ahead of the previous two fairs -- 11.1 million in Knoxville in 1982 and 7 million in New Orleans in 1984 -- but well short of Montreal's 50 million for Expo 67.

But Vancouver had an unusually wet May and attendance struggled to average 100,000 daily -- 20,000 short of the average needed to hit 20 million. The low point was May 13 (73,381) and officials began hedging their bets.

Things improved a bit in June. Attendance averaged 107,000 and the weather brightened. Officials began talking of an attendance bell curve -- with numbers jumping in the key July-August months.

July got off on the wrong foot as rain and cold turned the Canada Day weekend into a bust. Attendance was 100,011 on Sunday, June 29; 142,000 on June 30, the one day it didn't rain; and 128,000 on July 1, not a bad total considering it rained steadily until late afternoon.

After the long weekend, Pattison revised his project total to 18.5 million. In the third week of July, a concerned Pattison flew south to again beat the drum on southern California and Oregon TV.

By July's end, the fair had drawn 10,888,944 visits and Expo figure fliberts reset their sights on the magic 20-million mark.

So far in August, Expo has drawn an average of 144,000 a day -- more than a million a week. On August 4, a new attendance high was set at 174,709.

Last week, the boys in projections went back to their computers and came up with a total attendance figure of 20.3 million. This seems likely, and with warm weather continuing, it could reach 21 million.

What seems unlikely is the 200,000 daily total. The last chance appears to be the Labour Day Weekend. Or closing day.

GET-AWAY ENTERPRISES LIMITED

Get-Away Enterprises Incorporated, more often called simply Get-Away Vans is a company, is a Richmond-based firm that has grown from a small family company to the largest camper van conversion firm in North America in 10 years.

The core of the firm is the Gedak family. John Gedak is at the helm as the president, his brother Bern is the general manager, their parents Al and Marianne are still very active and add a distinctive European approach to rigid quality control.

Around this nucleus, they have assembled a strong team recognized industry-wide:

Bob MacDonald checks in as general sales manager, with Weldon Walberg and Jim Tompkins, responsible for Canadian and American marketing respectively.

Peter Skinder is Get-Away's production manager, Larry Taylor heads up design and development and Gordon Stephens looks after special vehicle sales.

For many years, Get-Away built strictly camper vans and concerned themselves solely with perfecting that art. They designed, wind tunnel tested and patented their air foil raised roof, designed their own power converter, and so on.

As the years progressed, they produced various floor plans in an attempt to maximize every available inch of a van's interior. Interiors more comparable to a yacht or an executive jet than a camper.

During 1985 and continuing this year, their increased use of maxi-length vans has given them even more room to create a spacious mini-motor home. Clever combination of weight saving construction methods, aero-dynamic research and engine and transmission packages have resulted in excellent fuel economy.

Special Vehicles Division

Get-Away has just launched a Corporate and Special Vehicles Division. Clients for this division include corporations, radio stations, clubs, anyone who needs one or even a fleet of high profile, rolling hi-tech billboards that grab attention on the road or at community events.

Special Vehicles is also involved in the design and construction of ambulances, wheelchair accessible vehicles, and general special needs units.

The Shuttle Buses

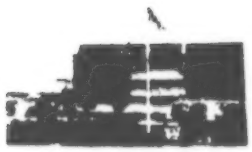
Transport Canada was one special client for the Special Vehicles Division -- designing and building the two shuttle buses to carry handicapped people from Canada Place to the Expo Site. The cost of research and development of the two vans was estimated at several hundred thousand dollars.

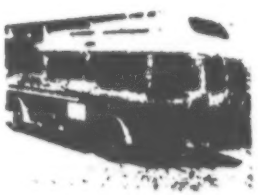
The two vans were turned over to Transport Minister Don Mazankowski at a special ceremony at Canada Place on Wednesday, April 30th. The ceremony was also attended by Canada Pavilion Commissioner General Bruce Howe and Lorne Kimber, representing handicapped organizations attending the fair.

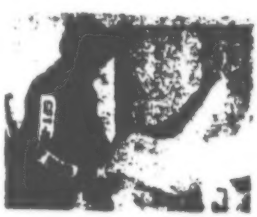
The vans can currently carry up to three wheelchair passengers and seven other passengers, or, depending on demand, can be quickly converted to other passenger configurations.

In addition to the customized luxury interiors and trouble-free ramp loading system, the vans are among the first to incorporate stricter safety construction 'rollover' features and as a result set new standards for safety for vehicles of this type.

These two vans involve some of the most modern hi-tech systems seen at Expo, such as the Videobus system.







EXPO DRIVERS' NEWSLETTER

A Newsletter for the Drivers of the Transport Canada Shuttle Bus Service for the Elderly and Disabled

SEPTEMBER 5, 1986

THE A-TEAM IS COMING

No, I'm afraid it's not Hannibal, BA Barracus, Face and Murdock.

The A-Team is 'The Access Team' -- a group of young people that assist disabled people at various functions. Decked out in their own brand of uniforms, they are well-trained in the art of assisting disabled persons. They have been retained to conduct passenger surveys on the Transport Canada Shuttle Buses.

Starting sometime in mid-September the A-Team will be joining you on the vehicles for four days. On the buses, they will be asking passengers various questions about the service and about Expo in general.

It is hoped that you will be able to assist these people when they join you and that you will enjoy their company for the four days of the survey.

RIDERSHIP TO DATE

As of August 28th you have carried 15,184 passengers -- with hardly a single complaint.

September 7-13 Specialized Period: COMMUNICATIONS

This will concentrate on the importance of communications to transportation in general. This focus underlies the other specialized periods and, indeed, almost all of the displays and demonstrations of technology at Expo.

There will be demonstrations of the Expo 86 information and communications system and seminars exploring the increasing substitution of communications for transportation. On display will be transmission/reception technologies, computers, controls such as alarm systems and robotics, applications in transportation, natural resources, manufacturing research and development, homes, recreation, postal and courier services.

The highlights of the week, however, is an exhibition of advanced technology during the International Communications and Computer Exhibition, held in the BC Place Stadium, adjacent to the Expo Site.

International Communications and Computer Exhibition (September 9-11) The Stadium at BC Place. This exhibition allows participants to introduce their products to a world of discriminating decision makers as well as a cross section of a world wide public.

International Conference on Satellite & Fibre Optic Communication (September 9-12) At the Robson Square Media Centre in Vancouver. An Expo-endorsed four-day international conference on key developments, applications and issues concerning satellite and fibre optic communications.

UPCOMING EVENTS

Japan Pavilion (Expo Site, Sept 5 to 12) handmade flowers of silk and other materials.

United Nations (Expo Site, Sept 6) The date is yet to be confirmed, but United Nations Day will be sometime between September 6 and 12.

Coho Festival (West Vancouver, Sept 3 to 7) Salmon barbecues, mountain bike rallies, live entertainment, and a 14-kilometer fun run.

The run, organized by the YMCA will start on Sunday, September 7 at 8:00 a.m. from Ambleside Park behind Park Royal and will cross Lions Gate Bridge, through Vanier Park ending in Kisilano Park near the Show Boat.

For more information on the Coho Festival, contact festival co-ordinator Peter Burns at 926-5669.

International Conference on Concrete in Tranpsortation (Holiday Inn, Sept 8-10) This conference will serve as a forum on the use of concrete in air, land and marine transportation facilities.

OUT-OF-TOWN EVENTS

Rossland Golden City Days (Rossland, September 5 to 8) Annual get together in Kootenay Country.

MORE ON EXPO SERVICES FOR VISITORS WITH SPECIAL NEEDS

In the August 22 Newsletter, some of the Expo services for visitors with special needs were discussed. The general accessibility of the site was described as well as the special accessible features at the Canada Pavilion.

It should be noted that all International Pavilions are accessible to wheelchair patrons. The exhibits in some of these pavilions are of particular interest to visitors with impaired mobility.

On display are some of the latest in vehicle designs for the disabled, such as the voice-activated Daimler-Benz and the voice-controlled wheelchair in the German Pavilion and the Elswick Envoy car for chairbound drivers at the British Pavilion. In the Swiss Pavilion are various devices for moving wheelchairs up and down stairs and for evacuating the disabled in emergencies.

All Provincial, State and Corporate Pavilions are also accessible to guests in wheelchairs.

Restaurants, Theatres and Cabarets. All restaurants, theatres and cabarets on site are wheelchair accessible, including restroom facilities in all restaurants. Space in theatres has been allotted for viewing from wheelchairs. There are spaces for 18 wheelchairs at the Xerox International Theatre, ten at Expo Theatre, eight at Kodak Pacific Bowl, four at the Futures Theatre and six at the Omnimax Theatre. Performer facilities, backstage areas and dressing rooms are wheelchair accessible.

Amusement Rides. The Cariboo Log Chute, the Looping Starship and the Scream Machine are not accessible to mobility handicapped guests. The Observatron section of the Space Tower can accommodate two wheelchairs per trip. The Space Drop section of this ride, however, cannot accommodate wheelchairs. The 1907 Philadelphia Company Carrousel can accommodate up to four wheelchairs at a time.

Getting Around On Site. The Ferry service is wheelchair accessible. As is the Monorail. The last car of each monorail train can accommodate two wheelchairs and there are wheelchair ramps at all seven stations. The demonstration track of Japan's HSST (High Speed Surface Transport) is fully accessible to wheelchairs. The SK people mover at the French Pavilion, made by the French Company Soule, has specially marked cabins which are wheelchair accessible. Both the CP Air Skyride and the Air Canada Skyride have the capacity to accommodate disabled visitors. Those with electric wheelchairs, however, are required to make a round trip, leaving their wheelchairs at the point of departure. Those with fold-up wheelchairs make make a one-way trip.

Transportation to the Site. All cars on the SkyTrain are easily accessible to most wheelchairs. HandyDart is a B.C. Transit-operated special service for the disabled. By phoning 873-4464, arrangements can be made for a trip from your home to any of the gates.

EXPO DRIVERS' NEWSLETTER

A Newsletter for the Drivers of the Transport Canada Shuttle Bus Service for the Elderly and Disabled

SEPTEMBER 12, 1986

RIDERSHIP TO DATE

As of August 31st you have carried 15,659 passengers -- 5,589 in August alone. Of the 5,589 passengers, 741 were in wheelchairs, 780 were ambulatory disabled, 2770 were senior citizens and 1298 were attendants.

Although the number of wheelchairs has increased from 438 in May to 741 in August, the number of wheelchairs as a percent of total ridership has decreased from 19 percent to 13 percent. I suspect that one of the reasons is that more ambulatory people are finding that the Shuttle Service is easier to use than either the SkyTrain or some of the other Expo Shuttle buses since the Shuttle Bus is always on time and schedule.

The passenger loading seems to be spreading out a bit over the day. There does not seem to be any really heavy peak period. Still, the afternoon and early evening hours are a bit heavier than the early morning and late night.

Canada Gate is still the most used pickup point by far, with about 62 percent of all passengers boarding here. Stadium Gate is second with 14 percent of the passengers and the East Gate is third with 13 percent. The West Gate contributes only 11 percent of the ridership.

The average number of passengers carried every hour in August was 6.48. This can be compared to May, when the passengers per hour was only 2.77. Amar Dosansh still leads the race with 7.65 passengers per hour in August but everyone else is fairly close behind. The productivity by driver seems to really depend on the time of each driver's shift -- if they have more morning shifts, their productivity seems to be lower (makes sense, I think).

A PLEA FOR COMMENTS

At the end of Expo, a report will be prepared outlining the experience with the Shuttle Bus Service. This report would benefit immensely from any comments that you might have.

If you have any comments, please write them on the back of your log sheets. For example, one comment that I heard was that the RMS Video-Bus system disables car alarms.

Just a quick note would be appreciated -- problems you are having with taxis, your concerns with the vehicle, complaints from passengers, anything at all.

CANADA PAVILION OFFERS FREE RIDES TO EXPO

The Canada Pavilion has launched a transportation service for senior citizens and the physically disabled. Eligible passengers can be picked up at their homes and taken to the Canada Pavilion. Return transportation is also available.

The Lulu Transit Authority, as it is called, is a free service operated by the Canadian Association of Disability Communicators (CADC) and uses two specially-equipped vans provided by Chrysler Canada and modified by Get-Away Enterprises Limited.

CADC operates the service daily from 9:00 a.m. to 9:00 p.m. on a first-come, first-served basis. For more information call 274-7455.

September 12-21 Specialized Period: UNDERWATER AND OFFSHORE RESOUCES

These exciting times in underwater technology, marked by major advances in submersibles, one-atmosphere suits, robotics and underwater telemetry, are rich with the promise of subsequent progress in scientific research, underwater mining, offshore drilling and salvage operations.

Displays in the specially-built, 12 feet deep tank will include self-contained and surface support systems, conventional and mixed gas equipment, cutting and work equipment, lifesaving equipment, pipeline systems, fishing and fish processing vessels, safety and training.

There will be extensive demonstrations of underwater equipment, including some involving the vital element of underwater telecommunications.

Diving Tank and Exhibit Area (Sept 12-21) At the Kodak Pacific Bowl. A [illegible] diving tank donated by Can[illegible] Services Ltd. is available to [illegible] demonstrations including [illegible] submersibles, diving systems, robotics, [illegible] and photography, and underwater communications.

Conference on the Challenge of Offshore Development (Sept 16-17) The purpose of this conference is to present the Norwegian experience how international oil companies and experienced contractors see the future development in Norwegian waters, and compare those views with international challenges to the petroleum industry.

UPCOMING EVENTS

International Conference on Satellite & Fibre Optic Communication (September 12) At the Robson Square Media Centre in Vancouver. The last day of an Expo-endorsed four-day conference on key developments and issues concerning satellite and fibre optic communications.

The Future of the Sea Symposium (Hyatt Regency Hotel, September 12-14) A three-day international symposium set up to provide a forum for discussing future development of our ocean waters.

Vancouver Craft Market (VanDusen Botanical Gardens, September 14) Knifemaking, exclusive handpainted silk, pewter, porcelain miniatures, pottery and more. 5251 Oak Street at 37th Avenue.

Mexico National Day (Expo Site, September 15) A Mexican film festival takes place September 5-11 at the Ridge Theatre. Then the Ballet Folklorico de Guadalajara performs at Expo Theatre September 13-14 at 8:00 p.m. The Papantla Flyers perform at the Pacific Bowl September 13-15, tentatively at 10:30 a.m. Mexico's National Day is September 15 and celebrations begin at 6:30 p.m. at the Plaza of Nations with a musical program followed by the traditional Cry of Independence.

Seminar on Emergency Response Systems for Hazardous Material Spills (International Plaza Hotel, September 14-15) A two-day international seminar for professionals in the field.

Aerospace Industries Association Conference (Bayshore Inn, September 15-17) International meeting of the aerospace industries at the Westin Bayshore Inn.

Transportation of Dangerous Goods (Pacific Maritime Training, September 15-18) A conference on the issues involved in the transportation of dangerous goods at the Pacific Maritime Training Institute.

Third World Affairs Dinner (Hyatt Regency Hotel, September 17) Guest speaker at this dinner is Lee Iacocca. Phone 687-8414.

National Truck Rodeo (Doman's Truck Yard, September 17-19) A truck rodeo to determine the best drivers at 12751 Vulcan Way in Richmond.

OUT-OF-TOWN EVENTS

Heritage Days & Fall Fair (Salmon Arm, September 12 to 14) Annual fair in the high country.

EXPO DRIVERS' NEWSLETTER

A Newsletter for the Drivers of the Transport Canada Shuttle Bus Service for the Elderly and Disabled

SEPTEMBER 19, 1986

PASSENGER SURVEYS

The passenger surveys by the A-Team will be taking place as you read this. Please help them out with any advice or assistance you can spare.

EXPO ATTENDANCE

The September Crush is on.

Throngs of tourists are flocking to the world's fair despite projections that attendance would fall off in September.

As of Wednesday, there had been 2.3 million visits in September, a daily average of 136,500. If that trend continues, Expo will record about 4.1 million visits this month -- roughly the same number as July and second only to August.

The September figures were given a big boost by the record daily attendance of almost 185,000 last Saturday.

Monthly Attendance

May	3.2 million	107,000
June	3.4 million	113,000
July	4.1 million	132,000
August	4.3 million	139,000
September	4.1 million	136,000

RIDERSHIP TO DATE

As of September 11th you have carried 17,783 passengers.

UPCOMING EVENTS

Vancouver Centennial Chrysanthemum Show (West Galleria, Oakridge Mall, Sept 19 to 23) Presented by the Point Grey Association and the University Club.

Festival of Animation (Ridge Theatre, Sept 19 to 23) More than 18 different animated shorts from all over the world including Vancouver animator Marv Newland's 'Sing Beast Sing'. 738-6311.

Boundary Bay Air Carnival (Boundary Bay Airport, Sept 20 to 21) Exhibitor's day is Saturday. The general public is on Sunday, the 21st, between 10:00 a.m. and 6:00 p.m. The price of admission is $5.00 for adults and $2.00 for children. There is a pancake breakfast, beer and wine garden, displays, demos and exibits of lighter-than-air technology.

Inter-Regional Meet of Rolls-Royce Owners Club (Expo Site, Sept 20) At the Kodak Pacific Bowl. An exhibition of 50-150 Rolls-Royce and Bentley automobiles ranging from early 1907 to current models.

CANAMEX Rally (Canada Place, Sept 20) Departs Sept 20 at Canada Place and arrives October 11 at the Kodak Pacific Bowl. Starting and ending in Vancouver, the route will take contestants south through the western states, into Mexico City, where drivers will then head north to Alaska and the Yukon Territory before re-entering British Columbia and the finish.

Prince Edward Island Day (Expo Site, September 22) The Charlottetown Festival production of Anne of Green Gables opens in the evening at the Queen Elizabeth Theatre but events begin at 10:30 a.m. at Expo's Plaza of Nations. Entertainers include The Clay Potatoes. There will be an Anne of Green Gables lookalike contest outside the P.E.I. Pavilion at 2:45 p.m. for ages 11-25 years. Prize is a trip for two to P.E.I.

Lighter-Than-Air, an International Exhibition (Expo Site, Sept 22-28) At the Expo site, downtown Vancouver, and an airport in the local area. This event examines, on an international scale, the full spectrum of lighter-than-air technology.

Magee Free Car Wash (Various locations, Sept 20) Look for 20 locations in Vancouver for a free car wash between 10:00 am and 3:00 pm.

Kingdom of Saudi Arabia National Day (Expo Site, September 23) Some speeches open the 10:00 a.m. to noon celebrations at Plaza of Nations, followed by the National Folkloric dance troupe and Saudi Radio and TV Band playing tractional instruments. The pop singer Mohammed Abdo may appear. The pavilion will be illuminated and such Arabic treats as coffee and baklawa will be served. The dance troupe, band and Abdo will perform at the Xerox Theatre at 5:00 p.m., 6:30 p.m. and 8:00 pm.m

Wood Expo 86 (BC Place Stadium, September 25-27) This exhibition will ba a major trade and consumer oriented exhibition and will address issues affecting the forest industry worldwide.

Canadian Pacific Air Lines Day (Expo Site, September 26) Displays at the Air Plaza and possibly free flights to selected visitors to the CP Skyride and Pavilion. A pipe band performs at the pavilion and about 150,000 photos of a DC-10 will be handed out. CP Air hopes to link its celebrations with 19 other pavilions representing CP Air destinations.

MORE ABOUT THE GET-AWAY VANS

On Wednesday, I visited with John Gedac and Larry Taylor at the Get-Away plant in Richmond, hoping to learn a bit more about the vans.

Some of the features that the vans have incorporated include: non-skid flooring, special-designed seats, large windows, integrated construction, and fire resistant materials.

When the flooring in the van was first installed, it looked good but it was felt that it might be slippery and a possible hazard. Larry looked all around for a possible replacement material and finally found that hospitals quite often use a non-skid high-traffic flooring that might be suitable. This is the material that is on the floor of the vans now.

The walls of the van are created from a special plastic-injected molding that provides for a better appearing, as well as a tougher, wall for the wear and tear experienced in transit applications such as this.

The seats were especially designed by Get-Away for older people with possible back problems that might be driving a vehicle for long periods. They use an firmer orthopedic design with a lumbar supports for the lower back. It is basically a European-style approach to chair design.

The tinted windows are large, letting in a lot of light and providing excellent visibility. They are covered with venition-style louvered blinds for additional shading.

Since all the windows open and there are roof vents with bug screens, the ventilation is excellent.

The running boards are also specially designed by Get-Away. They look sporty, provide an easy step up to the van for the elderly, and protect the sides of the van from mud and rocks that may be thrown up from the slightly wider than normal tires.

The roof is designed to provide the same strength as a steel rollbar. It will support 1-1/2 times the vehicle weight. It was computer stress tested to meet a new safety code.

And, you have to be happy with the ramps. If you were to raise and lower the ramp at every stop, in a 14-hour shift you would have raised and lowered the ramp 56 times or 392 times a week or 64,680 times during Expo. It is certain that an electric or hydraulic lift would have failed many times in that period (in addition to being so slow to operate that you would always be behind schedule).

EXPO DRIVERS' NEWSLETTER

A Newsletter for the Drivers of the Transport Canada Shuttle Bus Service for the Elderly and Disabled

SEPTEMBER 26, 1986

RIDERSHIP TO DATE

As of September 11th you have carried 17,783 passengers -- quite a number of satisfied customers.

September 29 - October 5 Specialized Period: MODERN RAIL

The period covers all aspects of modern rail technology, both passenger and freight services.

It will be highlighted by an international passenger and freight equipment and maintenance exhibtion on the rail yards adjacent to the Expo site, focusing on rolling stock and control systems.

At the same time, the Third International Heavy Haul Conference will be held during the week, emphasizing an aspect of rail of particular importance to British Columbia, as well as a conference organized by the American Railroad Engineering Association.

Some of the latest and most stunning examples of rail technology will be displayed during this week -- passenger rail vehicles and systems desing, freight rail cars and systems design, communications systems, intermodal operations, piggyback and container handling, maintenance and recovery equipment, and the Japanese HSST train, which is operating on 400 metres of track adjacent to the Japanese pavilion on the expo site.

Symposium on Modern Rail: The View from Switzerland (September 30 to October 1) At the Swiss Pavilion. This symposium is organized by Swissrail and will incorporate comprehensive presenations on the current status and future development of the rail system in Switzerland.

Technological Development of the Italian Railways in the 1990s (September 30) At the Hotel Meridien this Tuesday. Much of the talk will be about high-speed transport.

American Railway Engineering Conference (October 1-3) At the Hotel Vancouver. This will include an international conference program as well as rail excursions. The French/British rail tunnel across the English Channel and construction of the Rogers Pass tunnel in B.C. will be discussed.

Third International Heavy Haul Railway Conference (October 13-17) The delegates will be adding up ways to increase efficiency and improve technology to keep down costs of railway operations.

UPCOMING EVENTS

Canadian Pacific Air Lines Day (Expo Site, September 26) Displays at the Air Plaza and possibly free flights to selected visitors to the CP Skyride and Pavilion. A pipe band performs at the pavilion and about 150,000 photos of a DC-10 will be handed out. CP Air hopes to link its celebrations with 19 other pavilions representing CP Air destinations.

Yugoslavia National Day (Expo Site, October 4) Folklore group Lada is expected to perform in the Xerox Theatre September 30th, October 1st, 2nd, 4th and 5th.

Octoberfest (BC Place, October 4) Gala celebrations of the German heritage -- great food and lively entertainment under the dome at B.C. Place. Phone 689-4805 for more information.

FOR SALE: ONE SLIGHTLY-USED PAVILION

Washington State is putting its pavilion on the auction block. All the equipment fixtures and furnishings will be up for grabs after the fair closes its doors on October 13th.

The biggest items on sale are the 74 slide projectors and three movie projectors used in the pavilion's multimedia presentation.

The sale will be advertised today and sealed bids must be in to the pavilion by October 6th.

DEALS ON SOUVENIRS

The name of the game at several Expo gift shops is 'Let's make a deal' as they try to sell off merchandise before the fair closes next month.

Several pavilions have offered discounts of as much as 30 percent and prices on many of the items in the gift shops are negotiable.

WHAT HAPPENED TO THE A-TEAM?

In last week's newsletter, I stated that the A-Team would be conducting passenger surveys last weekend. The A-Team couldn't make it at that time. Sorry for the confusion.

I've got my fingers crossed that they will be out in full force this weekend. I would like to have the survey done in time to put the results in this newsletter for you guys.

COMMUNIC-AID

An innovative communication system for the communication-impaired has been on display at the airport over the past several months.

It is a computerized system of communication aids for the benefit of travellers with sight, speech and hearing impairments and has been sponsored by Transport Canada's Transportation Development Centre.

Providing audio and visual messages using a display screen, speech synthesizer, keyboard, printer and telephone-type receiver, the prototype communications centre provides information on airport facilities, flight arrivals and departures, ground transportation services, accommodation, and facilities for the disabled at Expo 86. Travellers can also summon airport or airline representatives to the communications centre and converse with them using the communication aids provided.